



NAPHS

NATIONAL ACTION PLAN FOR HEALTH SECURITY

2024/ 25 - 2028/ 29

BUILD

NATIONAL HEALTH SECURITY

BENEFIT THE GLOBE



Federal Democratic Republic of Ethiopia

JUNE 2024

ETHIOPIA

FOREWORD

The International Health Regulation, IHR (2005), is an instrument of international law that is legally binding on 196 countries, including the 194 WHO Member States. On June 15, 2017, the IHR (2005) came into force to enhance core capacities for Global Health Security, including improving capacities to detect, prevent, and respond to Public Health Emergencies of International Concern (PHEIC) and subsequently reducing their social and economic impact. Going one step further, the World Health Organization (WHO) Member States have adopted the Regional Strategy for Health Security which recommends conducting the Joint External Evaluations (JEEs) of core capacities as identified by the IHR 2005. Based on the findings of the JEEs, Member States are recommended to develop a National Action Plans for Health Security (NAPHS).

In line with this, Ethiopia, as a signatory to the IHR (2005), conducted its first JEE in March 2016, and in September 2023 for the second time. The results highlighted strengths and weaknesses across the different core capacities, and accordingly recommended 88 priority actions across the 19 IHR technical areas to be included in the NAPHS.

The process of developing this NAPHS document, was highly rewarding due to the active involvement of relevant government sectors, development partners, and other non-governmental organizations, with the close follow-up of the responsible leadership. It involved the extensive review of existing sectoral strategic plans and other multi-sectoral national health security strategic documents, conducting situation analyses, followed by a process of prioritization, planning, costing, and resources mapping for its implementation.

It is, therefore, my strong belief that this National Action Plan for Health Security, which is well aligned with the country's overall health policy, will bring significant improvements to the capacities to prevent, detect, and respond to health threats, with benefits extending beyond the health sector. Furthermore, the NAPHS will help our country to realize a demonstrated capacity that builds community resilience against health threats and their impacts.

Finally, I would like to recognize and appreciate the government sectors, our development partners and the national multisectoral One Healths coordination platform which have been actively involved in the preparation this NAPHS. As we move towards the implementation of this plan in the coming five years, it is my great hope that this active engagement across all stakeholders continues with renewed commitment from all.

Dr Mekdes Daba
Minister, Ministry of Health

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Additionally, all development partners and donors are acknowledged which include: the World Health Organization (WHO), Food and Agriculture Organization of the United Nations (FAO), U.S. Centers for Disease Control and Prevention (US-CDC), U.S. Agency for International Development (USAID), Africa Centers for Disease Control (Africa CDC), United Kingdom Health Security Agency (UKHSA), Resolves To Save lives (RTSL), Johns Hopkins University, Core Groups, Global One Health Initiative, Family Health International 360 (FHI-360), other nongovernmental organizations, and the National One Health Steering Committee for their commendable engagement and magnificent contribution in the preparation, and commitment to supporting the implementation of this National Action Plan for Health Security.

Special thanks go to the EPHI top leadership, IHR-National Focal Point, NAPHS Core Committee members and all technical areas experts for their continued effort throughout the process, and realization of this second NAPHS and We would like to express our special gratitude to the WHO's Headquarters, Africa Regional Office and Country Office, and RSTL for the initiation and overall technical and financial support of our country's National Action Plan for Health Security. We would like also to extend our gratitude to USAID Health Behavior Activities-FHI 360 for their financial and technical support of Layout design, printing, and dissemination of the NAPHS document.

EXECUTIVE SUMMARY

Global health security is increasingly becoming a top priority worldwide. The COVID-19 pandemic showed the need to develop strong and resilient health system through building International Health Regulation (IHR) core capacities that enable countries to detect, notify and respond early and adequately to any pandemic, epidemic or outbreak due to multiple health hazards.

WHO with its member states have adopted and implemented IHR since 2005. Subsequently, countries have designed and implemented different capacity building initiatives to strengthen IHR core capacities. NAPHS is a major country owned, multisectoral, multi-years plan to accelerate the implementation of IHR core capacities. NAPHS is an overarching process to capture all ongoing and new preparedness initiatives that respond to national priorities for health security. It is based on the One Health and whole of- government approach for the management of all hazards and for fulfillment of the IHR requirements. NAPHS brings sectors together, identifies partners and allocates resources for health security capacity development.

Ethiopia as a WHO member state is a signatory to the IHR 2005, has shown commitments to the implementation of the IHR 2005. The first NAPHS in Ethiopia was developed and implemented from 2019 to 2023 based on the findings from the Joint External Evaluation (JEE) that was commenced in 2016. In 2024, Ethiopia become chair of the steering group of the Global Health Security Agenda (GHSA) demonstrating its global leadership.

Implementation of the first NAPHS contributed to the increase of average overall JEE scores of the country from 48% in JEE-2016 to 61% in JEE-2023. Likewise, the State Parties Self-Assessment Annual Reporting (SPAR) scores increased from 58% in 2018 to 70% in 2023. This improvement has shown Ethiopia's commitment towards strengthening the national health security, and the subsequent development of NAPHS.

Based on the JEE and SPAR outcomes, the development of the NAPHS 2024/25-2028/29 was initiated. The process involved frequent meetings with stakeholders from different sectors, a desktop review, planning and costing exercises with the involvement of relevant government sectors (with more than 80 experts involved), partners, and other NGOs. In addition, existing sectoral and other strategic documents reviewed, and strength, weakness, opportunities, and threats (SWOT) analysis was conducted.

EXECUTIVE SUMMARY

With the primary goal of ensuring maximum global and national health security while minimizing interference with international travel and trade, the plan was set based on the WHO strategic pillars: prevent, detect, respond and others IHR related hazard, which will help the country achieve its mission and vision.

These strategic pillars contain fifty-seven (57) objectives based on the JEE indicators across the nineteen (19) action packages indicated in the IHR 2005. These objectives were set based on the outcomes of the JEE, and under each objective a set of activities identified. These activities can be categorized into four main thematic areas of IHR-health security: Prevent, Detect, Response, and Other IHR-related hazards.

The implementation of the set of activities for the next five years requires a total of 109,138,827,418 Ethiopian Birr ($\approx$ US\$ 1,928,254,648). Costs associated with immunization activities account for approximately 68.9% of the total cost, and most of it has already been budgeted. Among the remaining eighteen (18) action packages, the main cost drivers are health services provision, national laboratory systems, zoonotic diseases, infection prevention and control, and antimicrobial resistance.

The proposed objectives and activities under the nineteen (19) action packages will be implemented in the next five years (2024/25 – 2028/29) through the involvement of different sectors through a One Health approach. Implementation of the NAPHS will be consistently monitored using the agreed monitoring and evaluation framework. The successful completion of the plan will significantly strengthen the country's IHR capacity to detect, prevent, and respond to different health security threats, subsequently improving the overall health security in the country.

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CHAPTER 1: BACKGROUND

1.1 Ethiopia Country Profile:

With about 123 million people (1, 3), Ethiopia is the second most populous nation in Africa after Nigeria, and one of the fastest-growing economies in the region, with an estimated 6.4% growth in FY2021/22. However, it also remains one of the poorest, with a per capita gross national income of \$1,020. Ethiopia aims to reach lower-middle-income status by 2025 (4).

Ethiopia's robust growth rate builds on a longer-term record of growth over the past 15 years where the country's economy grew at an average of 10% per year, one of the highest rates in the world. Ethiopia's real gross domestic product (GDP) growth slowed down from FY2019/20 to FY2021/22 due to multiple shocks including COVID-19, with growth in industry and services easing to single digits. However, agriculture, where over 70% of the population is employed, was not significantly affected by the COVID-19 pandemic, and its contribution to growth slightly improved compared to previous years (2, 5).

In 2023 Ethiopia has reached an estimated GDP scale of 156.1 billion dollars nominal, for PPP the country's economy has reached an estimated 393.85 billion dollars. This mostly comes from a services-based economy with agriculture. Ethiopia can potentially shift from being a net importer of agricultural commodities to generating sizable surpluses according to its 10-year prospective plan which aims to boost the domestic and homegrown economy as much as 20% (relative to domestic demand) (7,8).

The government has also launched a 10-Year Development Plan, based on its 2019 Home-Grown Economic Reform Agenda, which runs from 2020/21 to 2029/30. The plan aims to foster efficiency and introduce competition in key growth-enabling sectors like (energy, logistics, and telecom), improve the business climate, and address macroeconomic imbalances. Ethiopia has registered strong social and economic development in recent years, leading important progress towards Sustainable Development Goal 2 (zero hunger) (4).

1.2 Socioeconomic Status:

The health security status of a country has been influenced by a myriad of factors that extend beyond the confines of the health sector. According to the IMF estimate the Real GDP annual growth rate between 2022 to 2024 is 6.4% to 6.2%, respectively. This projection is less than the previous projection years and due to political instability, the influence of COVID-19 and other factors. Despite these facts these Real GDP precipitant is about \$857, which is lower than the regional average.

In 2022, the share of agriculture in Ethiopia's gross domestic product was 37.64 %, industry contributed approximately 22.72 % and the services sector contributed about 36.56 percent. The labor force is divided into three sectors: agriculture (65 %), industry (5.2 %), and service (24%), wholesale and retail trades constituted (5.9%) (5,8).

1.3 Sociodemographic Characteristics

According to the 2016 EDHS report, the average household size in Ethiopia is 4.6 persons. Urban households (3.5 persons) are slightly smaller than rural households (4.9 persons). Majority of the population lives in rural areas. The country's population continues to grow with the sharp decrease in infant, child, and maternal mortality over the past decade and only a slight decrease in the total fertility rate. Ethiopia's rapid population growth is putting increasing pressure on land resources, expanding environmental degradation, and raising vulnerability to food shortages. With a total fertility rate per woman of 4.6 (2.3 in urban areas and 5.2 in rural areas), the population structure of the country is expectedly very young with more than 40% of the population being below the age of 15 years (12,16).

The Country Age structure according to the 2023 estimate

- 0-14 years: 38.91% (male 22,821,026/female 22,498,331)
- 15-64 years: 57.55% (male 33,345,764/female 33,672,933)
- 65 years and over: 3.54% (male 1,887,831/female 2,236,827)
- And the median age is 20.2 years (male 20/female 20.2)

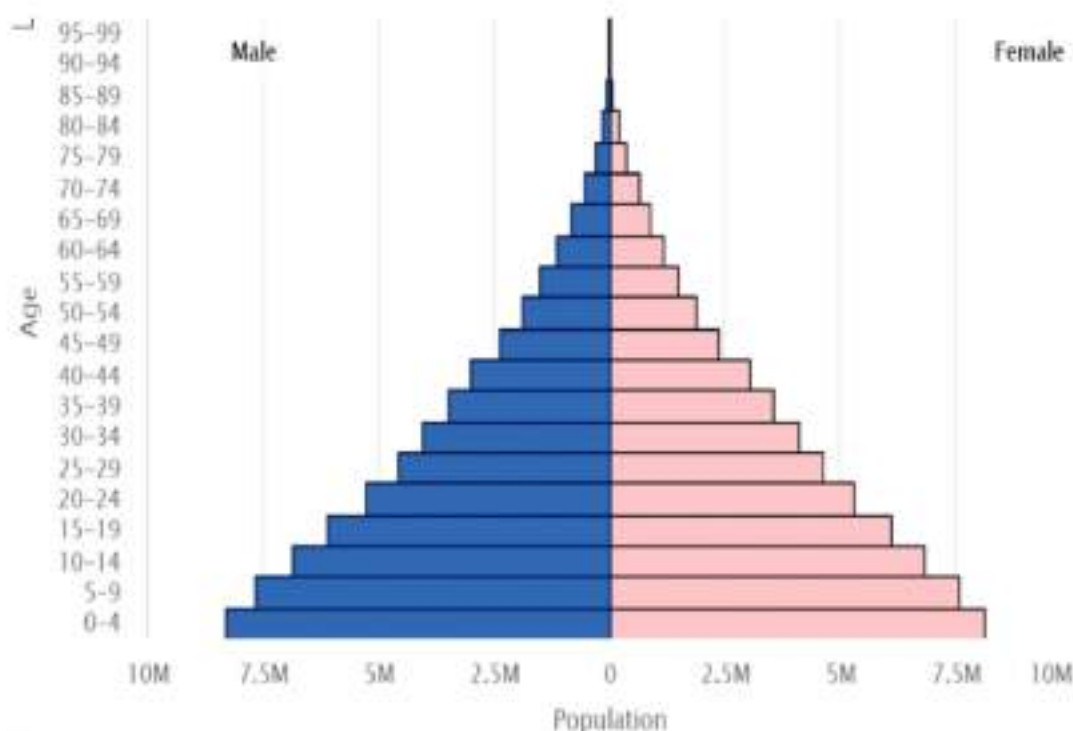


Figure 1 Age and Sex Distribution of Ethiopia

1.4 Health Security Governance in Ethiopia

This section on governance in Ethiopia offers a framework for authorities and responsibilities for managing and implementing health security across the country (11).

- **System of Government:** The Federal Democratic Republic of Ethiopia consists of legislative, executive, and judicial sections. The federal government is responsible for national defense, foreign relations, and general policy of common interest and benefits. The State Council has the power of legislation on matters falling under state authority. The Council has power to draft, adopt, and amend the state constitution and the House of Peoples' Representatives has legislative power in all matters assigned by the constitution to federal authority.
- **State of the Federation:** Due to the country's political reform there are fourteen (14) member states delimited based on settlement patterns, language identity, and consent of the people concerned. The states have legislative, executive, and judicial powers like the federal government. Member states of the Federal Democratic Republic are Afar, Amhara, Benishangul Gumuz, Gambela, Harari, Oromia, Somali, Sidama, Southern Nations, Nationalities, and Peoples, Central Ethiopian Peoples, Southwest Ethiopia people's region, and Tigray. In addition, there are two autonomous city administrations, Addis Ababa City Administration and Dire Dawa City Administration.
- **Financial Governance:** The Ministry of Finance (MOF) is a ministry within the Cabinet responsible for general financial management and economic policy of Ethiopia, allocation of economic assistance, and the national budget. MOFEC's innovative "pool service" system provides procurement services to different public zonal offices. The strategy helps to reduce public resources waste as expenses that could be incurred by various offices are avoided (5).
- **Health and Health Security Governance:** With the recent political and economic reforms, the Council of Ministers pursuant to Article 103 of the Definition of Powers and Duties of the Executive Organs of the Federal Democratic Republic of Ethiopia Proclamation No. 1263/2021. Under this regulation two health sectors power and duties were redefined.
 - **Ethiopian Public Health Institute:** according to the regulation no. 529/2023 the Ethiopian Public Health Institute will have the responsibilities to serve as the National International Health Regulations (IHR) National Focal Point in accordance with international and national health laws, coordinate the same; and serve as the secretariate of multi-sectoral and multi-disciplinary One Health implementation (12).

CHAPTER 2. STRATEGIC AND SITUATIONAL ASSESSMENT

2.1 Introduction

The Ten-year development plan clearly outlines Ethiopia's strategy for future demography and human development, to build an effective health system based on prevention and control methods; to mitigate maternal and child mortality; and to prevent communicable and noncommunicable diseases that may cause death or illness (16).

To mitigate the complex effects of health security challenges, which pose significant burdens on community and national development endeavors, a strategic and collaborative approach is crucial. Hence, conducting assessments of risks, facilitators, and strategic interventions related to health security is imperative to gain insights into the country's health security landscape (18, 19).

2.2 Risk Profiling and Hazard Analysis

Over the years, Ethiopia's traditional planning approach overlooked risk profiling, focusing instead on ad hoc and fragmented emergency management. To address this gap, in 2021, Ethiopia incorporated emergency risk management planning utilizing the WHO Strategic Tool for Assessing Risk (STAR). This tool facilitates the development of Emergency Preparedness and Response Plans (EPRP) based on identified risks. Coordinated by the Ethiopian Public Health Institute (EPHI), Vulnerability and Risk Assessment Mapping (VRAM) exercises had been conducted to inform EPRP at national, regional, and woreda levels. This initiative marks a significant milestone in the country's health emergency and disaster risk management, involving cross-sectoral collaboration and leadership from Regional Health Bureaus (RHBs) and Regional Public Health Institutes (RPHIs), with active participation from zonal and woreda health offices. Currently, woredas are authorized not only to identify local risks but also to coordinate detection, prevention, and response efforts effectively (17).

The hazard analysis has been conducted every year by using available data about Ethiopia and reports from different sectors. All prevalent hazards in the nation were considered and the analysis and risk profiling were conducted using the WHO Strategic Tool for Assessing Risk. The country's 2023 summary of hazard analysis result and the calculated Risk Index of Hazards is shown below in Table 1 and Fig.2 respectively (9, 19).

Hazard Type		Risk Level Result
Cholera		5. Very high
Anthrax		4. High
Meningitis		5. Very high
Relapsing fever		4. High
Epidemic typhus		3. Moderate
Dysentery		3. Moderate
Measles		5. Very high
Polio		4. High
Rabies		5. Very high
COVID-19		4. High
RSV		3. Moderate
Influenzas		2. Low
Malaria		5. Very high
dengue fever		5. Very high
Chikungunya		5. Very high
yellow fever		4. High
Ebola virus disease		4. High
visceral leishmaniasis		5. Very high
IDP Armed conflict		5. Very high
IDP flood		5. Very high
IDP drought		5. Very high
SAM		5. Very high

Table 1 Summary of Hazard Analysis Findings of the National Risk Assessment, 2023

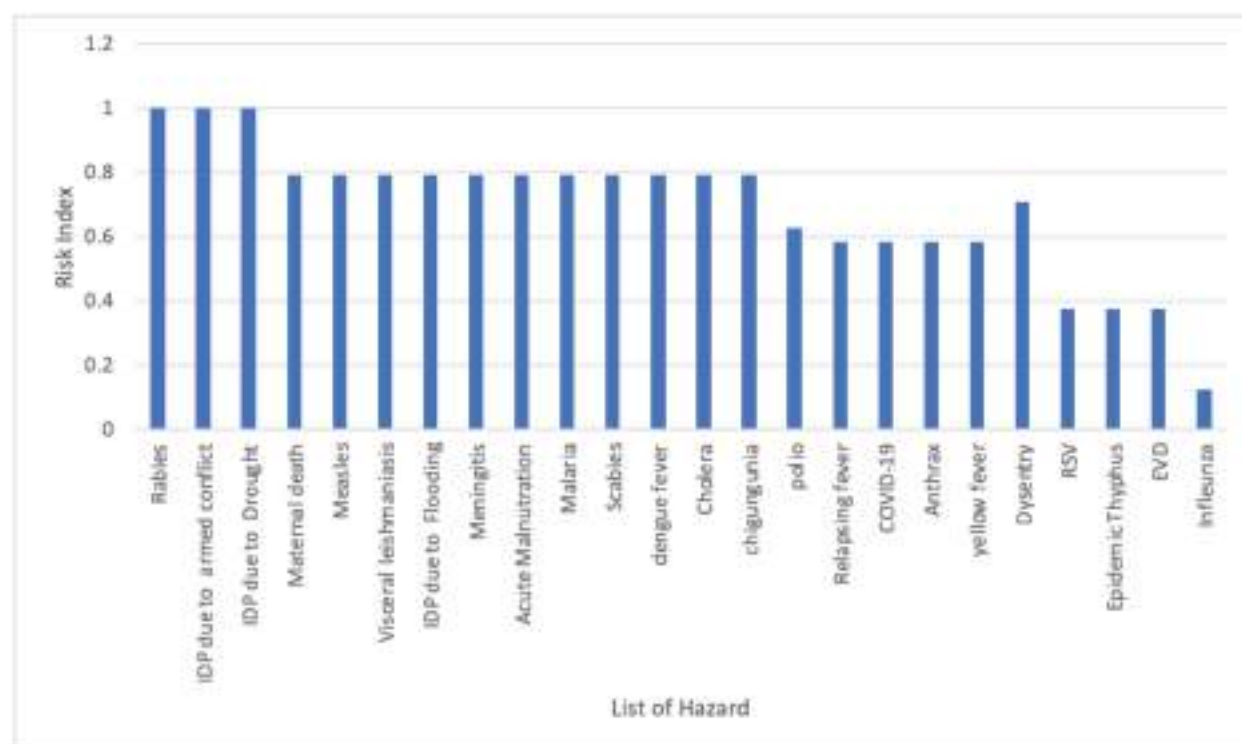


Figure 2. Calculated Risk Index of Hazards for Risk Assessment Exercise

2.3 SWOT Analysis and situational Assessment of Existing capacity

To gain a thorough understanding of the current context of health security capacity, a SWOT analysis was undertaken nationally with the engagement of relevant sectors and agencies. This encompassed a meticulous examination of strengths and weaknesses across critical areas, spanning governance structures, levels of political commitment, adequacy of human resources, and the robustness of infrastructure. The analysis also identified existing opportunities to advance health security endeavors and possible threats that hinder efforts (13). This comprehensive approach ensures a nuanced understanding of the context, facilitating informed decision-making and strategic planning, the outcome of which are provided below:

Strength

- The government commitment in the Establishment of the Ethiopian Public Health Institute and strong PHEM system at all administrative levels.
- Establishment of the national and sub-national Emergency Operating Centers (EOCs) – besides the national one, the country has EOCs in all regions and some zones.
- Capacity to undertake the activation and management of the Incident Management System (IMS) during an emergency/outbreak.
- Training of surge teams through the AVoHC SURGE training initiative and Multi-sectoral Rapid Response Team.

- Existence of the multi-sectoral coordination through IHR-OH Secretariat and establishment of One Health Steering Committee
- Existence of the multi-sectoral national health security bulletin, and periodic/weekly epi-bulletin
- The establishment and launching of an integrated genomic core facility for surveillance and research in the Ethiopian Public Health Institute was a milestone in preventing, detecting, and responding to emerging and re-emerging infectious disease outbreaks in Ethiopia.
- Point of entry (airport and ground crossing) capacity enhanced for screening, inspection, isolation/quarantine, and control of infectious diseases.
- Improved Real time surveillance system and rumor management in public health emergency management.
- Strong work force development strategy in advanced, mid-level and frontline field epidemiology and public health experts.
- Developed various guidelines and SOPS including the PHEM guideline in the areas of preparedness, surveillance and response including POEs.
- New initiative on establishing PHEM at health facilities – facilitates early detection, reporting and response.
- The co-existence of public health laboratory and public health research at the EPHI strongly supports informed decision making and timely response against public health emergencies.

Weaknesses:

- Inefficient financial administration during epidemics and emergencies
- Weak NAPHS monitoring of NAPHS implementation and tracking.
- Inadequate resource mobilization for NAPHS implementation
- Absence of clear incentives during emergencies to raise motivation and commitment, and to reduce turnover of human resource.
- Inadequate human power for some of the IHR technical areas such as chemical and radiological hazards
- Lack of motivation and commitment of human resource
- Inadequate Infrastructure and technology
- Inadequate attention to public health emergency (PHE) preparedness - focus is mostly on response.
- Poor awareness and ownership of political leaders on public health security
- Gaps in legal frameworks for implementation of coordinated public health emergency management.
- Limited collaboration and coordination among different sectors and stakeholders
- Inadequate communication among different sectors including data and information sharing.

- Limited partnership with private sector and professional associations
- Delay in procurements and inadequate procurement system.
- Insufficient capacity building of the multi-sectoral experts on IHR, one health and health security
- Weak advocacy of the leadership at all levels on IHR and one health
- Poor coordination to utilize human resources at different level for effective PHEM.
- Inequitable distribution of health infrastructures
- Poor quality and interruption in power and communication facilities
- Limitations in diagnostic equipment and capabilities
- Inadequate veterinary facilities
- Inadequate facilities to deliver specialized care.
- Limited transportation facilities for emergency management (such as search and rescue)
- Inadequate preparedness level to reduce impact of climate change.
- Limited capacity of national metrology agency to forecast risks and issue warnings.
- Limited coordination of sectors for response of natural hazards
- Limited capacity on search, rescue, and emergency medical team
- Weak early warning systems in different sectors
- Gaps in standardization of activities and systems for public health security
- Weak surveillance systems for selected human and animal events
- Absence of strong surveillance systems for chemical and radiological hazards

Opportunities:

- The focus given by global political and health communities for public health emergencies and multi-sectoral One Health approach to address global health security threats.
- Focus given by WHO to strengthen IHR and public health emergency management systems in member countries.
- Growing interest on cross-border One Health initiatives
- Expanding private sector and development partners
- The interest of external academic institutes and organizations to work on public health security.
- The presence of international support for IHR Implementation (such as Global Health Security Agenda and the Pandemic Fund).
- Availability of international training opportunities for emergency workforce
- Focus given to infrastructure development by government including health facilities.
- Global focus to mitigate the impact of climate change on health.
- The presence of development partners to support health security and One Health interventions, including developing the PHEM system.
- Improved engagement of the private sector in community health services

Threats

- Conflicts and political instability in the Horn of Africa and influx of refugees
- Presences of sectorial emerging and existing competing priorities
- Economic inflation and fast change in the world economy affecting the affordability of health services.
- Infrastructure damages due to natural incidents
- Difficult landscapes of the country
- Impact of climate change (such as the effect of El Niño) leading to recurrent drought and internal immigration
- Cultural taboos and harmful traditional practices

2.4 IHR capacity and functional assessment

The GOE conducted the following IHR capacity assessment to assess the countries IHR implementation: The Joint External Evaluation (JEE), State Parties Self-Assessment Annual Reporting (SPAR), After Action Reviews/Inter-Action Reviews (AAR/IAR) and Simulation Exercises (Sim Ex) (6, 14).

Joint External Evaluation (JEE) Results

The JEE is based on the IHR technical areas grouped under the four IHR thematic areas; Prevent, Detect, Respond, and others.

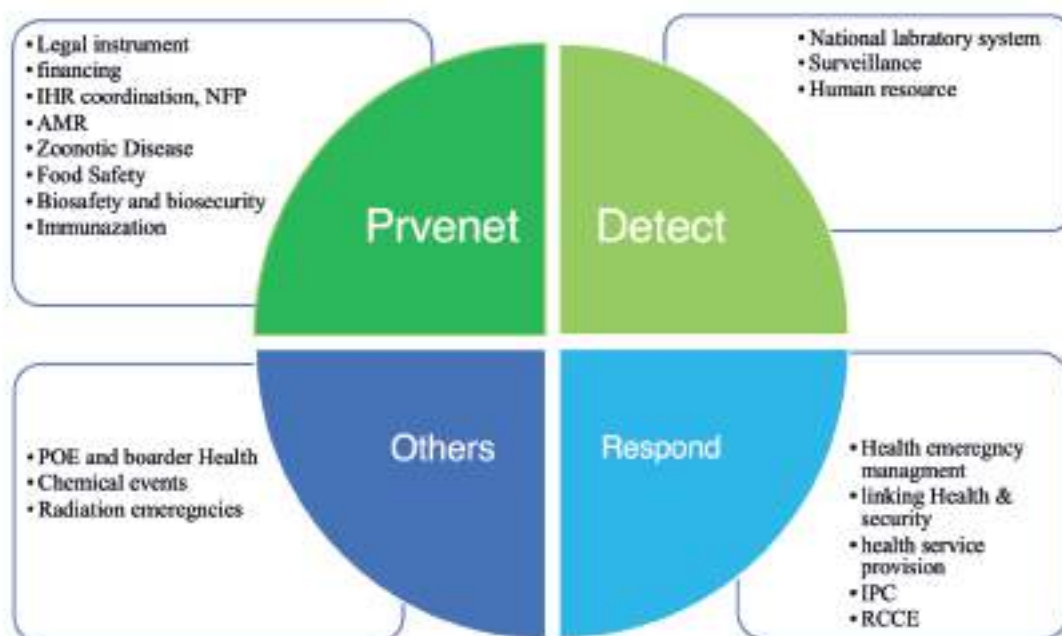


Figure 3 Distribution of the 19 Technical Areas across the Four Thematic Areas

Ethiopia conducted the first JEE in March 2016 and the findings used to develop NAPHS 2019-2023. Based on WHO's recommendations on the periodicity of JEE and the need to develop a new NAPHS before the end of 2023, Ethiopia conducted the second JEE in September 2023 followed by preparation of NAPHS 2024-2028.

The Joint External Evaluations (JEE) of the core IHR capacities conducted both in 2016 and 2023 have highlighted some of the existing strengths and identified major gaps in some of the country's capacities. The average JEE score witnessed a notable improvement, rising from 48% in 2016 to 61% by 2023. This indicates a significant enhancement in the country's capacity to prevent, detect, and respond to public health emergencies. By comparing the Joint External Evaluation of the IHR core capacities report of 2016 with JEE of 2023, the following changes are observed (6).

Capacity	2016 Achievement		2023 Achievement	
	No.	%	No.	%
Sustainable Capacity	0	0		0
Demonstrated Capacity	9	20	17	30.4
Developed Capacity	16	35	26	46.4
Limited Capacity	17	37	12	21.4
No Capacity	4	9	1	1.8
Total Indicators	46		56	

Table 2 Joint External Evaluation Result

The implementation status of core capacity is indicated by a score that reflects the level of the country's advancement, and its capacity to institutionalize technical area competencies and ensure that they are sustainable. As illustrated in Table 2, demonstrated above and developed capacities are improved from 20% and 35% to 30.4% and 46.4%, respectively. Similarly, "no capacity" and limited capacity" which are reduced from 9% and 37% to 1.8% and 21.4%, respectively. There was no sustainable capacity recorded in both assessments. In a more detailed presentation of the 2023 JEE scores, Table 3 shows how many indicators under each of the 19 technical areas. ore detailed JEE findings are indicated in Annex I.

Capacity	Technical area	# of indicator
Prevent	P1. Legal instruments	2
	P2. Financing	2
	P3. IHR coordination, national IHR focal point functions and advocacy	3
	P4. Antimicrobial Resistance (AMR)	5
	P5. Zoonotic disease	3
	P6. Food safety	2
	P7. Biosafety and Biosecurity	2
	P8. Immunization	3
Detect	D1. National laboratory system	4
	D2. Surveillance	3
	D3. Human resources	4
Response	R1. Health emergency management	6
	R2. Linking public health and security authorities	1
	R3. Health services provision	3
	R4. Infection prevention and control	3
	R5. Risk communication and community engagement	3
Others	POE. Points of entry and boarder health	3
	CE. Chemical events	2
	RE. Radiation emergencies	2
		56

Table 3 JEE Summary Finding based on Capacity and the 19 Technical Areas, 2023.

Furthermore, the 2023 JEE recommend eighty-eight (88) priority actions to be taken across the nineteen (19) technical areas being evaluated. In addition, the following major strengths and major areas that need improvements, were identified by the external evaluation team: The major gaps and challenges that will need attention and support across the sectors, and these included:

- Finalization and endorsement of guidelines, SOPs frameworks that are in draft form.
- Elevation of the IHR National Focal Point and the Port Health Services to a required level.
- Have a well-defined information sharing structure for strategic health information across the sectors.
- Institutionalization of functional exercises that include IARs/AARs and simulation exercises to validate capacities and test systems for public health emergency management.
- Improving the domestic financial support for IHR implementation using a multisectoral approach.

Despite the above areas of improvement, there were areas that provided a solid foundation for the work of health security preparedness, and these are reflected below:

- Application of the whole government approach in IHR implementation due to a strong political will.
- Presence and availability of several legal instruments, policies, and guidelines for IHR implementation.
- Huge partner support towards a strong health security preparedness structure in the country.
- Existence of extraordinarily strong multisectoral coordination mechanism for public health response.
- The presence of a very robust One Health Platform at both National and Regional level.
- Strong/robust IHR technical Leadership and stewardship.

Overall, there is still limited human resources across all major sectors to support IHR implementation. However, there is recognized capacity to implement IHR in all assessed nineteen (19) technical areas to achieve the required minimum core capacities. There is a need to have continuous training of key cadres across the relevant sections / sectors and this will go a long way to strengthen the existing mechanisms and capacities of Ethiopia to respond to public health events and major public health risks. The Federal Government of Ethiopia needs to build on the gains they have made over the past five years and sustain the momentum of the JEE process to implement the priority actions of the national action plan for health security that prioritizes activities to address key gaps, with the participation and support of all relevant sectors at all levels.

State parties Self-Assessment Annual Reporting (SPAR)

In June 2018, the new IHR States Parties' Self-Assessment Annual Reporting tool (SPAR) was officially launched to support states fulfill the obligation under article 54 and resolution A61.2 to report on the status of IHR core capacities to the World Health Assembly through the WHO secretariat (14).

The GOE has consistently and timely submitted SPAR to WHO for the years 2018-2023. The 2023 SPAR was conducted using the revised SPAR tool and by engaging all relevant sectors and partners. The process was prepared by the EPH/MOH in collaboration with the WHO country office and the National One Health Steering Committee through the One Health approach. Average scores for all the thirty-five (35) indicators of 2023 SPAR were 70% which is above the global and regional average scores of 64% and 50%, respectively. Ethiopia's SPAR scores for years 2018 to 2023 are presented in Figure 4 below.

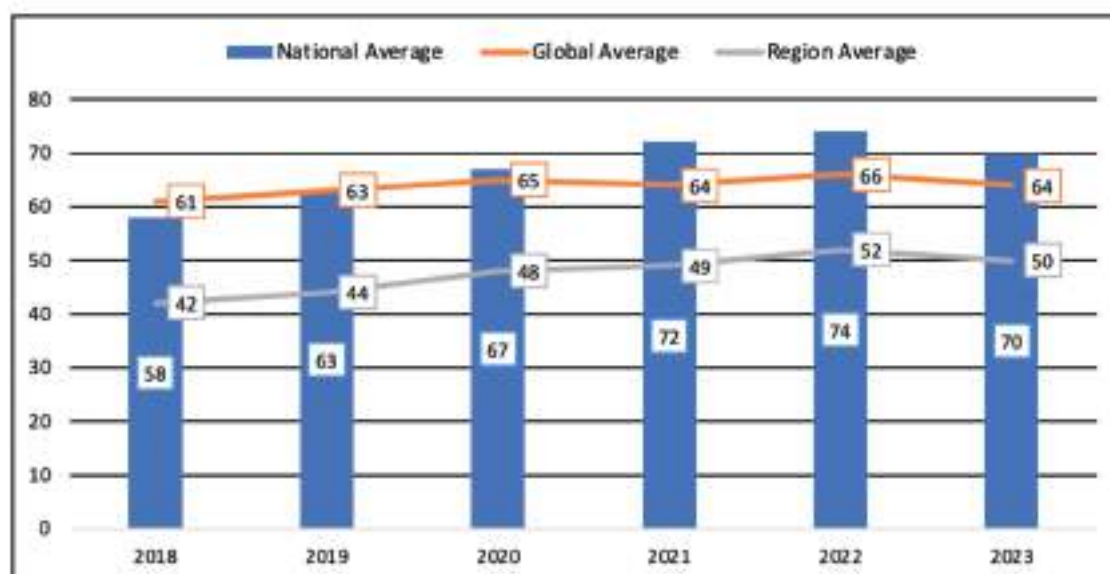


Figure 4 State Parties Self-Assessment Annual Reporting (SPAR) Result, 2018-2023

After Action Reviews (AAR) and Interaction Review (IAR)

The Ministry of Health and EPHI have a lot of experiences in responding to health emergencies due to disease outbreaks, conflicts, and natural calamities. By implementing the emergency preparedness and response cycle, opportunities have been creating to review the functional capacity of public health and emergency response systems to identify practical areas for continued improvement. These have been done by facilitating AAR and IAR for concluded and on-going emergencies, respectively (12, 13).

Review	Health emergency	Year	Level
AAR	Cholera outbreak	2020	Region (Oromia, Somali, SNNP)
AAR	Cholera outbreak	2019	Region (Afar, Amhara, Oromia)
AAR	Yellow Fever outbreak	2020	Region (SNNP)
IAR	COVID-19 pandemic	2020	National
AAR	Measles	2021	Region (Somali, Oromia, SNNP)
AAR	Polio outbreak	2021	Region (Somali, SNNP, Sidama)
AAR	Dengue Fever outbreak	2021	Region (Dire Dawa)
AAR	Anthrax outbreak	2021	Region (SNNP)
IAR	Cholera outbreak	2023	Region (Oromia)
IAR	Cholera outbreak	2023	National

Table 4 Summary of AAR and IARs conducted over the Past Years.

The review revealed many gaps in the public health emergency management system and put forward recommendations for improvement. Apart from efforts to implement the recommendations in subsequent preparedness and responses, the outputs of the reviews were synthesized and used in the development of this NAPHS 2024-2028.

The major gaps identified were in the areas of preparedness capacity (like logistics, finance, human resource), early warning and surveillance, laboratory detection and response, coordination and governance, and case management, all of which need improvement in policy directions, programmatic interventions and the entire PHEM system at all levels.

The country's 7-1-7 metrics analysis conducted based on the newly introduced global timeliness metrics to assess how well a country responded to an outbreak based on three targets were also reviewed as part of the NAPHS situation analysis. This metrics analysis method was used to measure detection (≤ 7 days from emergence), notification (≤ 1 day from detection), and implement prompt response actions (≤ 7 days from notification). The summary result is indicated in Fig. 5 below. Since 2022, the GOE is piloting these timelines metrics to monitor performance improvement in detection, notification, and response to public health events. Recently, retrospective performance analysis was conducted of 10 public health events which occurred from 2018-2022.

Based on the performance analysis report, the median time for detection of public health emergencies and events was 13 days (range 1 to 75 days). The median time for notification of public health emergencies and events to the next higher health system level for decision making was two days (range 0 days to 24), and the median time to complete the seven initial effective response components across all reviewed events took 10 days (range 1 to 47 days).

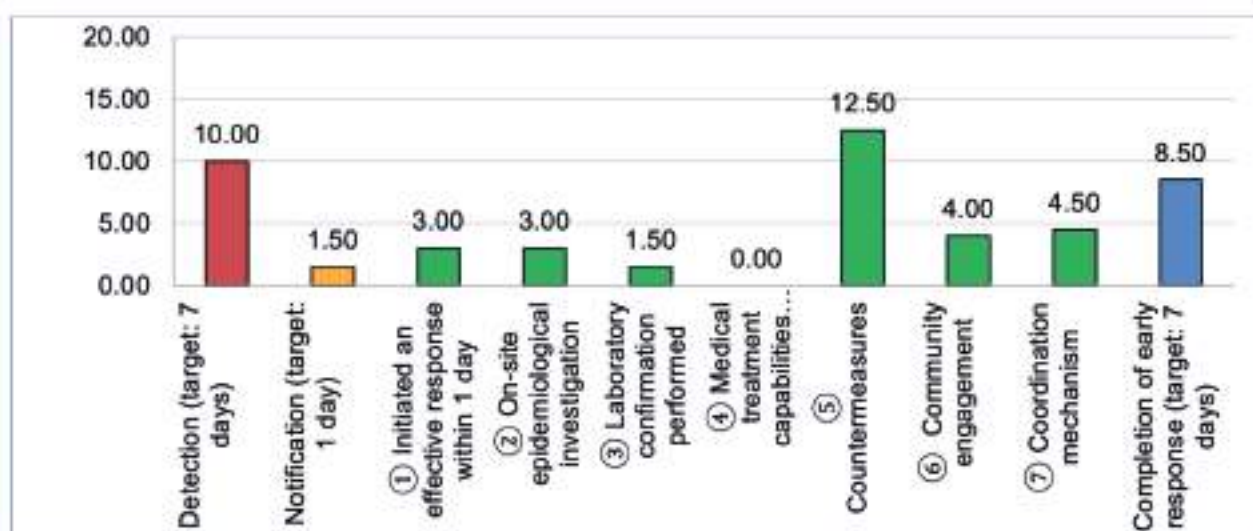


Figure 5 7-1-7 Analysis of Public Health Events

2.5 NAPHS 2019-2023 Review

During the desk review workshop for development of NAPHS 2024-2028, one of the major strategic health security documents reviewed was the implementation of the first NAPHS 2019-2013. As illustrated in Table 5, the review revealed that 70% of the 567 activities were either completed or in advanced stages of completion. Major strengths, weaknesses, challenges, and best practices were identified. In addition, identification of crucial activities that need to be considered in the new NAPHS (2024-28) were conducted (13).

Description	No. of activities	% Achievements
100% completion	260	45.9
50% & above	132	23.3
< 50% completion	175	30.9
Total	567	100

Table 5 Implementation Status of the First Ethiopia NAPHS, 2019-2023.

2.6 Other situational Assessments

Capacity assessment of the Disaster Risk Management System

The national capacity assessment identified existing capacity gaps and needs related to Disaster Risk Management and proposed a set of prioritized recommendations on how these capacities can be strengthened including the following (19).

- Conduct a multi hazard assessment to develop and update regularly a national multi hazard risk profile of the country.
- Develop SOP's and finalize data and information exchange among various technical institutions, line ministries, Disaster Risk Management Commission, universities etc.
- Develop DRM awareness and communication strategies at national and local levels through TV, radio, social media, printed materials and dedicated national days,
- Increase capacity in disease prediction, mapping, training, simulation, coordination, and develop emergency preparedness plan for hospitals.

Assessment in the Animal Health Sector

The development and growth of many countries depend on their performance of agriculture policies and economies. This relates to the quality of Veterinary Services (VS). The vital role of VS includes food-borne diseases and regional and international market access for animals and animal products. To assist in this role, the World Organization for Animal Health (OIE) and the Inter-American Institute for Cooperation in Agriculture (IICA) have joined forces to develop a tool for the evaluation of the Performances of Veterinary Services (PVS) for countries. The PVS tool is designed to assist VS in establishing its current level of performance to identify gaps and weaknesses regarding their capability to comply with OIE international standards, form a shared vision with stakeholders, establish priorities, and conduct strategic initiatives (15).

The key findings of the PVS assessment as indicated in Table 6 revealed that:

- Ethiopia has very competent veterinary services characterized by well-trained professionals. Unfortunately, the veterinary services have too many vacant positions mostly due to an insufficient number of professionals in the countryside.
- Laboratory quality assurance was implemented, and the central laboratory of the Animal Health Institute of the Ministry of Agriculture is accredited for certain of its functions adding significant additional space, equipment, and biosecurity capacity to the institute.

No	Component	No of Critical competency	Score (out of 5)
1	Human, Physical & Financial Resources	12	3.76
2	Technical Authority & Capability	18	3.33
3	Interaction with Stakeholders	7	2.85
4	Access to Markets	8	3.28
	Total	45	3.35 (67%)

Table 6 Performance of Veterinary Services (PVS) Assessment, 2023

Policy and National strategic documents

In addition to the above assessments the NAPHS alignment with other policies and strategies of the key sectoral strategic documents was done. The major strategic documents reviewed include: Growth and Transformation Plan of Ethiopia (GTP II), Health Policy/ Health Sector Transformation Plan (HSTP II), 2015 Global Health Security Agenda Roadmap, EPHI's third Strategic Management Plan (EPHI-SPM II), Veterinary Sector Transformation Plan, Livestock Master Plan, the 2023 capacity assessment report of the Disaster Risk Management System in Ethiopia, the 2023 audit report of the animal sector, IHR-PVS bridging document, and other sectors strategic documents including the EWCA (Ethiopia Wildlife Conservation Authority and EPA (Environmental protection Authority)(12, 13).

2.7 Approach followed to develop the NAPHS.

The development of Ethiopia NAPHS began with the volunteer enrolment of Ethiopia among the countries to undertake the second round of JEE.Ethiopia was among the first nations in Africa that have conducted the JEEs by using the third edition of JEE Tool. The external evaluation was conducted from September 18 to 22, 2023 after a series of internal consultation and self-evaluation with engagement of all relevant sectors, agencies, and partners. The JEE followed by development of this NAPHS document with engagement of the same stakeholders. The NAPHS development was guided by the WHO NAPHS implementation tool kit. The toolkit intended to help national health authorities and stakeholders involved in developing and strengthening national action plans for health security and public health emergencies. It provides and considers assessing, reviewing, and strengthening national capacities for health security and public health emergencies as illustrated in Figure 6 below.



Figure 6 NAPHS Development Frameworks

1. **Assess and prepare:** Following the JEE under the leadership of health sector, major health security strategic documents including strategic plans and policy documents were collected, key stakeholders (both governmental and non-governmental) in health security in Ethiopia were mapped and advocacy was conducted to support the development of the national action plan. A multi-sectoral and multidisciplinary stakeholders' document review workshop was conducted where all relevant IHR M&E assessments and other relevant documents were reviewed, and reference actions generated by using the WHO benchmark and review of the implementation of the previous NAPHS (2019-2023). Based on these review and assessment, key priority strategic actions were identified for each technical area by using the prioritization matrix.

2. **Develop:** A five-day NAPHS development workshop was conducted between 25-30 March 2023 with involvement of all partners and stakeholders that have been part of the document review process. The first four days were dedicated to finalizing the priority strategic action, detailed activities, timeline for implementation and costing of the strategic NAPHS. A M&E framework of the NAPHS was also developed with clear indicators, source of data, frequency of monitoring and related parameters on the last two days, a costed operational NAPHS for 2027 EFY (2024/25) was developed. The workshop's outputs were strategic and operational NAPHS with costs and their monitoring and evaluation framework.

NAPHS Coordination and Roadmap: A NAPHS coordination core committee drawn from government sectors and partners was officially established to oversee and coordinate the NAPHS process and collaboration across relevant sectors and technical areas. The committee initiated the process by preparing the TOR, technical areas working team and the roadmap. Subsequently, technical teams around the nineteen (19) technical areas were organized under six (6) groups to undertake all the NAPHS technical activities from assessment to planning and costing. In addition, group focal points were nominated to liaise and communicate with the NAPHS coordination team by providing technical and operational inputs. High-level decision makers and partners were consulted to ensure buy-in and ownership of the process. It was decided to develop both the strategic NAPHS and operational NAPHS. The identified milestone achievements in the roadmap are listed in the Figure 7.

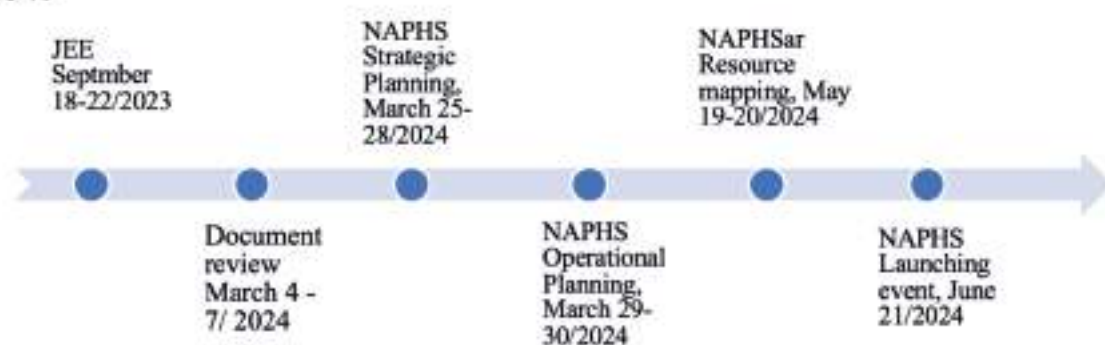


Figure 7 NAPHS Development Timeline

CHAPTER 3. VISION, MISSION, OBJECTIVES, GUIDING PRINCIPLES AND CORE VALUES OF NAPHS

3.1 VISION

A nation with secured health security capacity that ensures community resilience against public health threats and their socio-economic impacts

3.2 MISSION

Improve the International Health Regulation (2005) implementation through enhancing country ownership, political commitment, efficient resource allocation, and effective collaboration among government agencies, partners, and communities based on One Health approach.

3.3 General Objectives

The aim is to attain the maximum health security core capacities to prevent, detect and respond to public health threats including those emerging and re-emerging health threats occurring within animal- human-environment interfaces.

3.4 Guiding Principles and Core Values of NAPHS

Resilience: Recognizing the varied staff, programs, disciplines, and sector backgrounds with the aim of reaching a common goal.

Country ownership and leadership: The government of Ethiopia will provide political and technical oversight for all phases of the NAPHS (planning, implementation, monitoring, and evaluation) including committing domestic resources to finance the NAPHS.

Community engagement: community engagement will be achieved through a participatory approach in the development of culturally accepted and scientifically sound risk communication strategies. Individuals in households with adequate knowledge and skills about the prevention of illness can 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 individuals' health status.

Partnership, inter-sectoral, and multi-disciplinary collaboration: The partnership principle will be facilitated through inter-sectoral collaboration in the community and the involvement of the wider spectrum of all relevant stakeholders at the national level. This entails partnerships with other government departments, sectors, development partners, and academia.

Evidence-led and forward-looking: To consider emerging trends, risks, and health innovations; and Inter-country, regional, sub-regional, and cross-border cooperation to re-enforce timely information sharing and coordinated interventions.

One Health approach: A One Health approach that addresses public health events such as infectious diseases arising at the intersection of human, animal (domestic & wild), and environmental interface. This NAPHS is underpinned by the One Health approach and will ensure that all phases consider it.

Core Values of NAPHS:

- Community First
- Collaboration
- Accountability
- Leadership
- Sense of Urgency
- Continuous Improvement
- Integrity
- Sustainability
- Transparency
- Adaptability
- Equality
- Inclusion

CHAPTER 4. STRATEGIC FRAMEWORK AND IMPLEMENTATION APPROACH

4.1 Strategic Framework

Health systems for health security are crucial in ensuring equitable access to comprehensive, high-quality health services without financial hardships. Universal Health Coverage (UHC) aims to provide every individual with equitable access to comprehensive health services without financial hardships, while health security aims to mitigate the susceptibility of populations to acute public health crises that may transcend borders and jeopardize collective well-being. To achieve this alignment, health systems must be designed to exhibit resilience across various dimensions, allowing them to withstand shocks and stresses imposed by health emergencies. Accommodation involves the flexibility to adapt existing health infrastructure, policies, and procedures to the evolving circumstances of a crisis, such as repurposing healthcare facilities, reallocating personnel, or modifying service delivery models.

Adaptation emphasizes the necessity of continuous learning and improvement within health systems, leveraging insights gained from previous emergencies to enhance preparedness and response mechanisms. Recovery emphasizes the importance of restoring normalcy and rebuilding health systems in the aftermath of a crisis, addressing both physical and psychological well-being. Fostering health systems that embody resilience, adaptability, and responsiveness is dominant for safeguarding individual health and collective security in the face of unforeseen health threats. The health system for health security framework indicated in Figure 8 below.

The interplay between health systems and emergency preparedness capacities is fundamental, as each reinforces the other. Fortifying health systems allows them to identify and manage outbreaks swiftly, curtailing their spread. Enhanced public health functions, such as effective case management and robust surveillance systems, contribute to early disease detection and containment efforts (10).

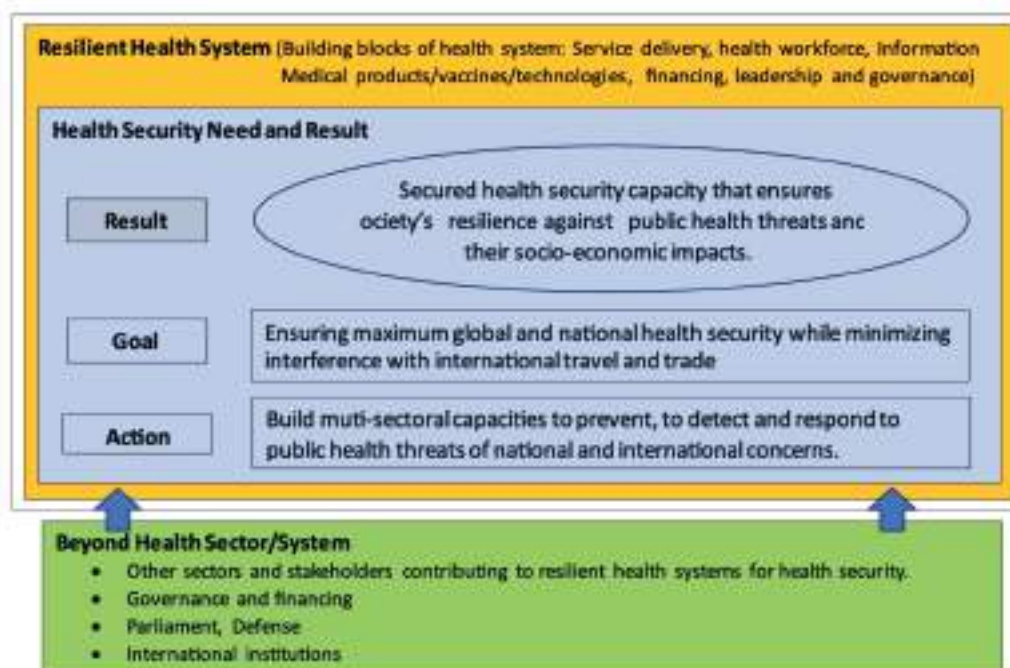


Figure 8 Health System for Health Security Frameworks.

Constructing health systems for health security requires a multifaceted approach, including developing and reinforcing International Health Regulations (IHR) capacities, bolstering various components of health systems, and fostering collaboration with other sectors. Cultivating resilient communities is central to achieving comprehensive health security.

The 20243 NAPHS plan development focuses on enhancing the core capacities of the International Health Regulations (IHR), as well as reinforcing certain elements of the health system and other sectors that are critically linked to health. The goal is to fortify health systems for improved health security. During the design phase, all NAPHS strategic pillars and objectives are formulated with careful consideration of the health system building blocks.

4.2 Strategic Pillars of NAPHS

The Ethiopian NAPHS strategic pillars were set based on the WHO strategic pillars: prevent, detect, respond and others IHR related hazards, which will help the country achieve its mission and vision. These strategic pillars contain strategic objectives as indicted in the implementation plan are designed to ensure maximum global and national health security. This will result in a nation with secured health security capacity that ensures society's resilience against public health threats and their socio-economic impacts through building multi-sectoral capacities to prevent, to detect and respond to public health threats of national and international concerns.

The four strategic pillars or thematic areas contain more than fifty-six (56) objectives of the 56 JEE indicators of the nineteen (19) action packages indicated in the IHR to improve health security. The proposed objectives were based on recommendations stated in the JEE assessment report. The impact-level target of the NAPHS by 2028 is to attain a demonstrable capacity of IHR requirements to detect, prevent, and respond to different health security threats.

Below are the descriptions of the four NAPHS strategic pillars:

I. Prevent

The purpose of this thematic area is to strengthen the Ethiopia's health system policy and financial mechanism and build operational and multi-sectoral coordination and communication capacities so as be able to carry out necessary measures to prevent occurrences and further global spread of disease that may be with potential public health emergencies of international concern. The major focus areas of the capacity to prevent under IHR include:

- Adequate legal instruments for States Parties to support and enable the implementation of all their obligations and rights created by the IHR.
- States Parties ensure provision of adequate funding for IHR implementation through the national budget or other mechanisms.
- Multisectoral/multidisciplinary approaches through national partnerships that allow efficient, alert and response systems for effective implementation of the IHR.
- A functional system in place for the national response to combat antimicrobial resistance (AMR) with a One Health approach.
- Functional multisectoral, multidisciplinary mechanisms, policies, systems, and practices are in place to minimize the transmission of zoonotic diseases from animals to human population.
- A functional system is in place for the surveillance of and response to foodborne diseases and food contamination risks or events with effective communication and collaboration among all sectors responsible for food safety.
- A whole-of-government multisectoral national biosafety and biosecurity system with high-consequence biological agents is identified, held, secured, and monitored in a minimal number of facilities according to best practices.
- A national vaccine delivery system – with nationwide reach, effective distribution, easy access for marginalized populations, adequate cold chain, and ongoing quality control – that can respond to new disease threats Respond.

II. Detect

This thematic area is aimed at developing the national anticipation and early detection capacities for multi-hazard (biological, chemical, radiological, and environmental) health security threats. All relevant sectors are expected to improve capabilities in surveillance, analysis, and diagnostic infrastructure and system including at points of entry with improved public risk communication and coordinated and clear system within and among sectors. The major focus areas of the capacity to detect under IHR include:

- Surveillance with a national laboratory system, including all relevant sectors, particularly human and animal health, and effective modern point-of-care and laboratory-based diagnostics.
- Improved surveillance for priority epidemic-prone diseases that is conducted according to international standards; and with regular analysis and reporting of surveillance data.
- States Parties with skilled and competent health personnel for sustainable and functional public health surveillance and response at all levels of the health system and the effective implementation of the IHR.

III. Response

The purpose of this thematic area is to strengthen and sustain the response capacity at all levels to incidences of multi-hazard national health security threats. All relevant sectors are expected to develop and expand the technical, leadership, coordination, and infrastructure for incident management systems and Emergency Operation Centers (EOCs). The thematic area also includes developing national, regional, and district level response capacity and systems. The major focus areas of the capacity to respond under IHR include:

- Management of health emergencies and systems to enable countries to be prepared and operationally ready for response to any public health event, including emergencies, in accordance with the all-hazard requirement of IHR.
- Rapid multisectoral response for any event of suspected or confirmed deliberate origin, including the capacity to link public health and law enforcement, and to provide timely international assistance.
- Resilient national health systems are essential for countries to prevent, detect, respond to, and recover from public health events, while ensuring the maintenance of health system functions, including the continued delivery of essential health services at all levels.
- Strong effective infection prevention and control (IPC) programs that enable the safety of health care, the delivery of essential services and the prevention and control of health care-acquired infections (HCAIs).
- Multilevel, multisectoral and multifaceted risk communication and community engagement (RCCE) capacity for public health emergencies with Real-time exchange of information.

IV. Others

This thematic area aim is to strengthen surveillance and response systems capacities at A point of entry (PoE) which is defined in the IHR as a passage for international entry or exit of travelers, baggage, cargo, containers, conveyances, goods, and postal parcels, as well as the agencies and areas providing services to the PoE on entry or exit. It also includes strengthening capacities for chemical events – including emergencies resulting from technological incidents, natural disasters, deliberate actions or contaminated foods and product, and capacities for detecting and managing radiological emergencies and nuclear accidents – referred to as radiation emergencies. The major focus areas under IHR include:

- Designate and maintain core capacities at international airports and ports (and, where justified for public health reasons, a State Party may designate ground crossings) that implement specific public health measures required to manage a variety of public health risks.
- Surveillance and capacity for chemical risks or events with effective communication and collaboration among the sectors responsible for chemical safety.

- Surveillance and response capacity for radiological emergencies and nuclear accidents with effective coordination among all sectors involved in radiation emergency preparedness and response.

4.3 Key Assumptions and Management

To understand and prepare for internal and external risks and to capitalize on existing internal and external enablers, a situational assessment with possible risk mitigations interventions were conducted to ensure effective and efficient design and implementation of the NAPHS. Based on the situational assessment findings and anticipated uncertainties and risks which may jeopardize the plan and its implementation, key assumptions crucial for development and successful implementation of the NAPHS are summarized below:

- Political commitment and leadership for implementation of the NAPHS will be improved through continuous strategic engagement, awareness development, and advocacy.
- Multisectoral coordination and collaboration with local and international stakeholders will be strengthened on planning, implementation, monitoring, and evaluation of the plan by building and systematizing existing multisectoral platforms at all levels.
- Government commitment to allocate financial resources will be strengthened and effective partnership and resource mobilization will be conducted to cover the budget deficit for implementation of the NAPHS.
- Existing efforts to develop human resources and infrastructure will continue, and improvements will be made on quality and equitable distribution.
- Planning, implementation, monitoring, and evaluation of the national health security plan will be based on strong community engagement and community demand.
- Environmental, climatic, and human-made challenges, such as internal and external conflicts, are assumed to be expanding. Due focus has been given to these issues during planning and their impact will also be considered during the plan's implementation.
- Planning and costing of the NAPHS is aligned with the national policies, strategies, and financial regulations. The costing also considers Ethiopia's socioeconomic growth demand and the situations of the global economy for the next five years (2024–2028).

4.4 Linkage and Interoperability of NAPHS with other strategies

The NAPHS operational framework references the work in the Ten-Year development plan 2021–2030, Health sector transformation Plan (HSTP-II), green economy strategy, technical guidelines, strategic plans, and relevant policies of the various sectors and implementing ministries, agencies and institutions.

The different sector specific strategic plans shall contribute to the attainment of the NAPHS that subscribes to the Ten-Year development plan 2021-2030. The NAPHS was developed to improve national capacities to implement IHR. The stakeholders shall implement all activities outlined in the NAPHS resulting primarily from the JEE 2023 recommendations.

The NAPHS operationalization is envisioned to involve various Ministries, Departments and Institutions that contribute to the different technical areas outlined in the plan. The different sectors will be coordinated through the EPHI's IHR and One Health Secretariate office. A diagram showing the relationship of implementing sectors and national plans in relation to the NAPHS is illustrated in Figure 9.

NAPHS implementation shall use an all-government approach drawing on the Public Private Partnership linkages. Resources will be integrated in the sector budgets and additional resources mobilized from within government and partners. Accountability and reporting on progress made will be in line with the Joint Sector Reviews coordinated by the EPHI. Ethiopia is a signatory to IHR (2005) and the World Organization for Animal Health (OIE) which requires regular reporting to WHO and OIE respectively. The National IHR Focal Point within the MoH/EPHI and the OIE country delegate based in Ministry of Agriculture, will be informed of all progress made in attainment of IHR competences in addition to any major events in humans and animals, respectively.

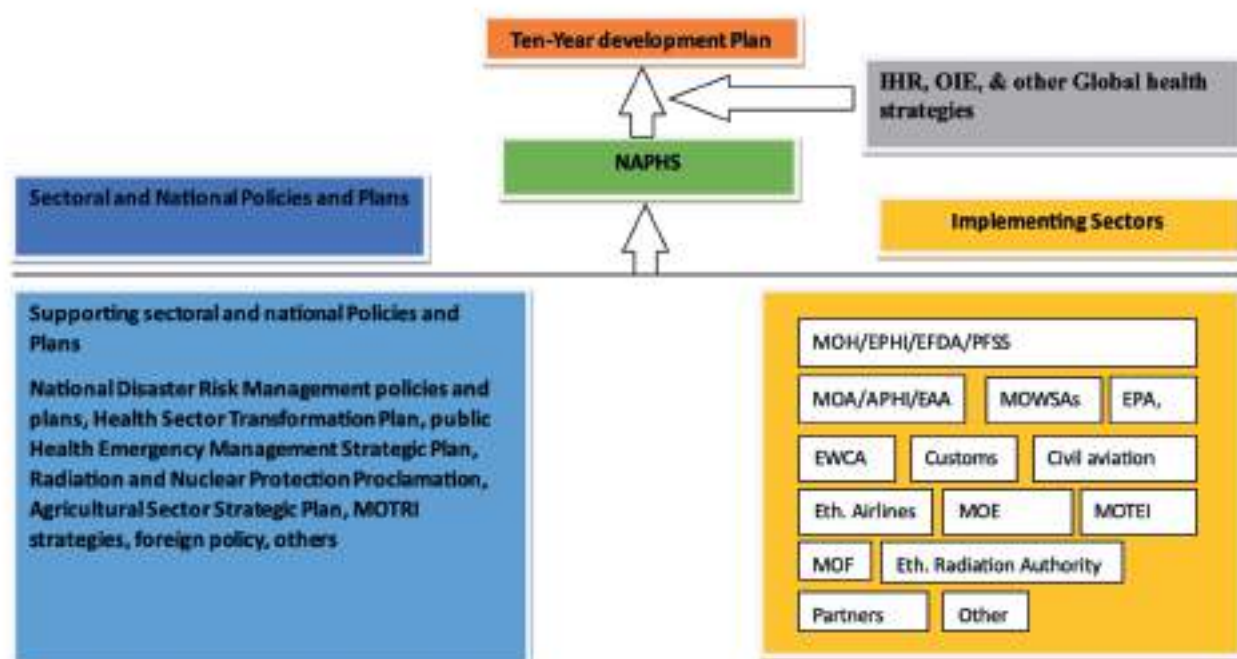


Figure 9 Showing Relation of Implementing Sectors and National Plans in Relation to the NAPHS.

4.5 Delivery of NAPHS

Stakeholder Analysis

Stakeholder analysis was performed based on the matrix of stakeholders' analysis indicated in annex 2. The result of the NAPHS stakeholders' analysis shown in the matrix below in Figure 10 which classifies stakeholders according to their level of influence and interest in NAPHS implementation and Health Security. The stakeholders are classified based on:

- **Stakeholders Level of Interest;** this refers to the degree to which stakeholders are affected by or invested in the NAPHS implementation. Stakeholders with high interest are those who are directly affected by the outcomes or have a stake in the success or failure of the project. Assessing interest involves understanding the motivations, concerns, and expectations of each stakeholder.
- **Stakeholders Level of Power;** Power refers to the ability of a stakeholder to influence decisions or actions related to the NAPHS implementation. Stakeholders with high power have a significant impact on the project or organization. This could be due to their authority, resources, expertise, or support base. Assessing power involves understanding the extent to which each stakeholder can affect it.



Figure 10 Showing National NAPHS Stakeholders Analysis Matrix

Based on this analysis there are four outcomes this are

- **High Power, High Interest:** These stakeholders are the most influential and should be actively engaged and managed closely during the implementation of NAPHS. These stakeholders need to be engaged/involved in decision making.

- **High Power, Low Interest:** These stakeholders may need to keep them satisfied or informed to prevent them from becoming disengaged. These stakeholders need to stay as strong advocates.
- **Low Power, High Interest:** While they may not have much influence, they are still important to consider and engage with, as they can be advocates or supporters. These stakeholders need to be consulted.
- **Low Power, Low Interest:** These stakeholders may require minimal communication or engagement. These stakeholders need to be informed and kept in close monitoring in case there is interest and power changed over time.

National Health Security Stakeholders and Coordination Mechanism

The preparation and implementation of NAPHS involves the support from a wide variety of stakeholders, including international development partners and local partners, through the global leadership of WHO and country ownership at all levels. The FMOH is primarily responsible for ensuring IHR 2005 ownership and coordination of implementation toward ensuring national health security. The FMOH is mandated to undertake the coordination and monitoring of IHR implementation, and the Multisectoral and Multi-disciplinary One Health implementation in the country through its technical wing, the Ethiopian Public Health Institute, that “Serve as the Secretariat.” The proposed national health security stakeholders and Coordination Mechanism are shown in Figure 11 below. It is well known that the overall implementation of the plan will be monitored through the multi-sectoral IHR monitoring framework which includes the State Parties Self-Assessment Annual Reporting (SPAR), Joint External Evaluation (JEE), Simulation Exercise (Sim Ex) and After-Action Review (AAR) based on the one health approach.



Figure 11 Stakeholders and Coordination Mechanism

CHAPTER 5. IMPLEMENTATION PLAN

5.1 Description of the implementation plan

The NAPHS implementation plan serves as a framework to help guide the nation and facilitate collaboration and coordination among stakeholders in pursuit of advancing national health security. The implementation plan elaborates on the health security capacity priorities over the next five years (2024 to 2028) by describing specific implementation activities on which stakeholders might collaborate to address those priorities. It is important to recognize that each activity described in the plan is subject to the availability of funds and resources.

The detailed NAPHS activity plan is indicated in Annex 2. Consequently, the NAPHS strategic objectives, and the priority activities encompassed in this section are described below.

5.2 Strategic Objectives of Implementation Plan

Fifty seven strategic objectives (Table 7) were identified based on desk review and expert opinion, including: JEE recommendations, SPAR 2023 findings, PVS recommendations, existing risk appraisals (SWOT analysis), identified priorities in national plans (like HSTP, Livestock Master Plan, 10 Year development plan, and other relevant documents), the IHR and OIE core capacities, review of relevant documents like the Global Health Security Agenda milestone library, and other countries' experience. Figure 12 below shows the number of strategic objectives around the 19 IHR technical areas.

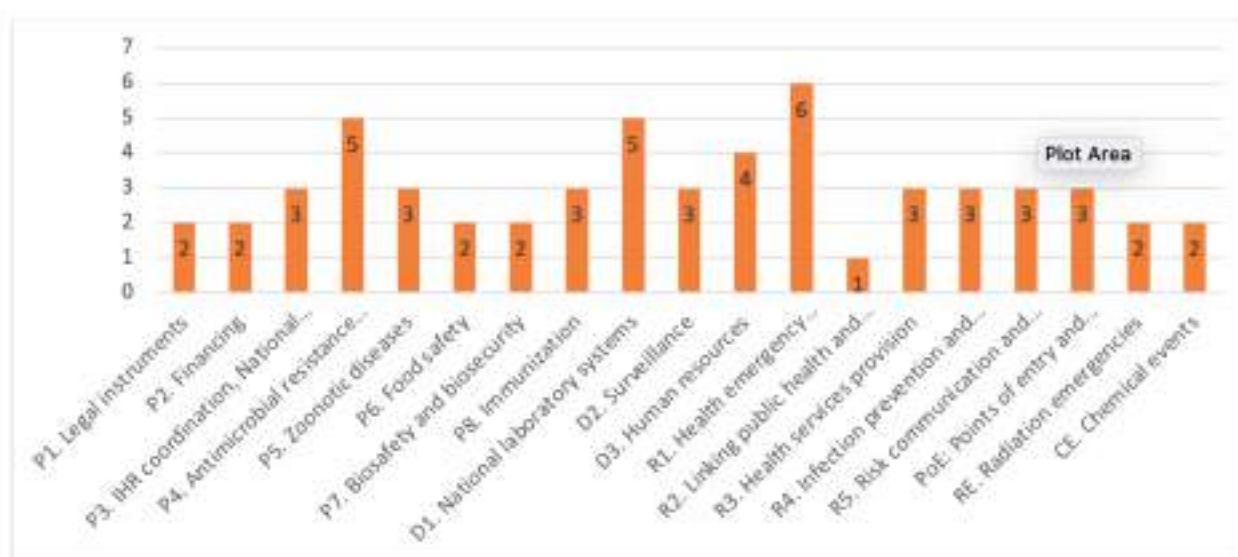


Figure 12 Number of strategic objectives across the 19 technical areas

JEE Indicator	Objective/Strategic Initiatives
P1. Legal instruments	
Legal instruments are in place across relevant sectors to support and enable IHR implementation and compliance	P1.1 Document and review legal instruments to identify gaps across relevant sectors and sub-national level and develop new or revised legal instruments as necessary to support and facilitate IHR implementation and compliance in a more efficient, effective, or beneficial manner
Gender equity and equality principles are applied throughout IHR capacities	P1.2 Strengthened Gender Equity and addressing inequality in Public Health Emergency activities by 2029
P2. Financing	
Financing resources for IHR implementation	P2.1 Ensure financing is available for the implementation of IHR capacities by 2029
Financial resources for public health emergency response	P2.2 Put in place financing mechanisms to ensure that funds are available and flexible for timely response to health emergencies by 2029
P3. IHR coordination, National IHR Focal Point functions and advocacy	
National IHR Focal Point functions	P3.1 Strengthen the functionality IHR NFP by 2029
Multisectoral coordination mechanisms	P3.2 Improve multisectoral IHR coordination mechanisms at all levels
Strategic planning for IHR, preparedness or health security	P3.3 Develop NAPHS, RAPHIS and monitoring, evaluation and learning framework
P4. Antimicrobial resistance (AMR)	
Multisectoral Coordination	P4.1 Develop and implement a multisectoral national action plan on AMR
AMR surveillance system is put in place	P4.2 Develop and implement a multisectoral national action plan on AMR
Effective mechanisms are in place to prevent multidrug resistant organisms (MDRO)	P4.3 Strengthen mechanisms for preventing MDRO
Optimize use of antimicrobial medicines in human health	P4.4 Ensure appropriate use of all antimicrobials in humans
Optimize use of antimicrobial medicines in animal health and agriculture	P4.5 Ensure responsible and prudent use of all antimicrobials in animal food production, animal health and agriculture systems
P5. Zoonotic diseases	
A multisectoral surveillance system is in place for priority Zoonotic diseases/pathogens	P5.1 Strengthen multisectoral surveillance systems for priority zoonotic diseases/pathogens
A functional mechanism to respond to priority zoonotic diseases is in place	P5.2 Enhance mechanisms for responding to priority zoonotic diseases at national and subnational levels
Safe practices in animal breeding and animal product system to limit the risk of zoonotic diseases	P5.3 Promote good sanitary practices in animal breeding and the production of animal products, to limit the risk of zoonotic disease transmission
P6. Food safety	
Surveillance systems are in place for the detection and monitoring of foodborne diseases and food contamination	P6.1 Strengthen surveillance systems for foodborne diseases and food contamination
A functional mechanism is in place for the response and management of food safety emergencies	P6.2 Strengthen mechanisms for response in management of food safety emergencies.
P7. Biosafety and biosecurity	

Table 7 . Proposed Objectives of the NAPHS based on JEE Indicators

JEE Indicator	Objective/Strategic Initiatives
Whole-of-government biosafety and biosecurity system is in place for human, animal, and agriculture facilities	P7.1 Strengthen biosafety and biosecurity system implementation in human, animal, and agriculture facilities
Biosafety and biosecurity training and practices in all relevant sectors (including human, animal, and agriculture)	P7.2 Improve human resource capacity on biosafety and biosecurity at all sectors
P8. Immunization	
Optimum vaccine coverage (measles) as part of a national program	P8.1 Increase vaccine coverage for priority vaccine-preventable diseases (VPDs) in the country
Provision of national vaccine access and delivery	P8.2 Strengthen capacity for vaccine access and delivery to target populations
An effective mechanism for mass vaccination for epidemics of VPDs	P8.3 Strengthen capacity for mass vaccination in response to VPD epidemics
D1. National laboratory systems	
Specimen referral and transport system	D1.1. Improve specimen referral and transportation system
Laboratory quality system	D1.2a. Strengthen the implementation of Laboratory Quality Management System at all levels
	D1.2b. Strengthen the implementation of External Quality Management (EQA) System at all levels
Laboratory testing capacity modalities	D1.3. Strengthen Laboratory testing capacity for the detection of all priority diseases and conditions
Effective national diagnostic network	P1.4. Strengthen laboratory information system, data management and sharing
D2. Surveillance	
Early warning surveillance systems are well established and functional	D2.1 Establish a well functional early warning surveillance system
Well-functioning event verification and investigation system is in place	D2.2 Establish a well-functioning event verification and investigation system
Surveillance data and information are systematically analyzed and shared to inform decision making for action	D2.3 Conduct timely and systematic analysis and sharing of data and information and enhance evidence for decision making and action
D3. Human resources	
Multisectoral workforce strategy	D3.1 Ensure competent multisectoral workforce that are capable to prevent, detect and response to public health emergencies or threats
Human resources are available to effectively implement IHR	D3.2 Develop a health workforce that is competent to prevent, detect, assess, notify, report, and respond to health emergencies of national and international concern at all levels of the health system to effectively implement IHR requirement
Workforce training	D3.3 Ensure trained and skilled emergency workforce equipped with necessary resources that are capable to prevent, detect and response to any public health emergencies or threats
Workforce surge during a public health event	D3.4 Ensure skilled and equipped multisectoral and multidisciplinary surge team that are ready to deploy immediately and capable to detect and response to public health outbreaks or threats
R1. Health emergency management	
Emergency risk and readiness assessment	R1.1 Develop capacities to conduct regular strategic (or equivalent) risk profiling, readiness assessment and RRAs to determine risks to be prioritized for health emergency management and support decision-makers during emergencies
Public health emergency operations center (PHEOC)	R1.2 Develop PHEOC capacities to enable all levels to respond in a timely manner to all hazard emergencies and disasters

Table 7. Proposed Objectives of the NAPHS based on JEE Indicators

JEE Indicator	Objective/Strategic Initiatives
Management of health emergency response	R1.3 Develop a management and coordination mechanism for timely emergency response to all hazard health emergencies and disasters
Activation and coordination of health personnel in a public health emergency	R1.4 Develop a functional system for activating, sending, receiving, and coordinating health personnel and teams during a health emergency
Emergency logistic and supply chain management	R1.5 Develop a functional system for activating and coordinating emergency logistics and supply chain management during a health emergency.
Research, development and innovation	R1.6 Develop and implement a RD&I mechanism to generate evidence-based solutions for emergency preparedness and response through research and development and dissemination of findings.
R2. Linking public health and security authorities	
Public health and security authorities (e.g., law enforcement, border control, customs) linked during a suspect or confirmed biological, chemical, or radiological event.	R2.1 Strengthen the coordination and collaboration between public health and security authorities to properly detect and respond to suspected or confirmed biological, chemical, or radiological events and any other public health emergencies.
R3. Health services provision	
Case management procedures	R3.1 Enhance case management interventions by evaluating, reviewing, updating, and disseminating diverse types of case management guidelines, SOPs, and protocols on a regular basis (3-5 years).
Mechanism for continuity of essential health services (EHS) during a health emergency is well established	R3.2 Ensure easily accessible, equitable, affordable, and effective essential health services by reducing barriers for continuity of essential health service during emergencies
Utilization of health services before, during and after health emergencies at all levels of health service delivery	R3.3 Enhance health service utilization by improving access, reporting systems and collaboration with private health facility owners.
R4. Infection prevention and control (IPC)	
IPC programmed	R4.1 Active IPC programmed implemented at national and healthcare facility levels
HCAI surveillance	R4.2 Develop and maintain a functioning and effective system for HCAI surveillance at national and healthcare facility levels
Safe environment in health facilities	R4.3 Ensure a safe environment in all healthcare facilities for health workers, patients, caregivers, visitors, and any other service provider/user
R5. Risk communication and community engagement (RCCE)	
Risk communication and community engagement (RCCE) systems	R5.1 Improve the RCCE systems with mechanisms for functions and resources to be in place and integrated within the broader emergency programs by the end of 2028
Risk communication	R5.2 Improve risk communication with delivered high quality, timely and impactful risk communication messages, and materials for the target communities by the end of 2028
Community engagement	R5.3 Improve community engagement with codesign, capacitating and involving community networks.
RE. Radiation emergencies	
Mechanisms are in place for detecting and responding to radiological and nuclear emergencies,	RE1.1 Strengthen policies, legislation, and multisectoral coordination, through implementation of information sharing mechanisms, advocacy, and capacity building activities to detect and respond to radio nuclear emergencies
Enabling environment in place for management of radiological and nuclear emergencies	RE1.2 Strengthen the enabling environment for the management of radiological emergencies through laboratory detection and response capacity with regular monitoring activities
PoE: Points of entry and border health	

Table 7. Proposed Objectives of the NAPHS based on JEE Indicators

JEE Indicator	Objective/Strategic Initiatives
always Core capacity requirements for Poesy (airports, ports, and ground crossings)	POE1.1 Confirm fully functionality of IHR-2005 Core capacity requirements using an all-hazard approach and integrated into national surveillance system at all PoE.
Effective public health response measure towards any events including biological hazard at all designated PoE.	POE 1.2 Provide well updated and revised Poesy and all hazard working document through regular assessments with standardized public health response measures and functional multi sectoral platforms
Risk based towards international travel related measures	POE1.3 Provide effective public health response measures including detection, prevention, response and reporting towards any events including biological hazards at all designated PoE.
CE. Chemical events	
Mechanisms are in place for surveillance, alert and response to chemical events or emergencies, supported by an enabling environment	CE1.1 Strengthen preparedness and surveillance activities for potential chemical hazards for the early detection, reporting and timely response to chemical incidents
Enabling environment is in place for the management of chemical events	CE1.2 Establish national multisectoral coordination and collaboration mechanisms, national policies, legislation and incident management plan for the management of chemical events.

Table 7. Proposed Objectives of the NAPHS based on JEE Indicators

5.3 Priority Activities

The prioritization of proposed activities under each strategic pillar over the five years considered the existing capacity in the country, critical gaps in the existing system, the country's financial capacity, activities considered to be critical to achieving the IHR requirements, expert opinion, and the priorities to interest of each sector. The below priority activities are those activities identified to be implemented at least in the first year period (2024/25), aimed at making the enabling environment stronger for better coordination, information sharing, and collaboration among the relevant sectors under each indicator. The priority activities under the main pillars aimed to improve the capacity to prevent, detect, respond, and others IHR-related hazards are summarized below.

Prevent

During the 2024-2025 implementation period, the major targets under each indicator aim to attain the demonstrable capacity in preventing the health threats. These include:

- Conduct a legal analysis at a selected subnational level (regional governments) and across relevant sectors and government levels (to complement the legal analysis conducted at the national level) to identify, understand, assess, and analyze gaps within subnational legal instruments for IHR implementation.
- Develop comprehensive legal instruments based on the assessment conducted at a national level to support and facilitate IHR implementation and compliance in a more efficient, effective, or beneficial manner.
- Conduct advocacy and sensitization meetings with relevant stakeholders for implementation of PHE legislation and IHR implementation at all levels.

- Establish and operationalize the National Multisectoral Public Health Security Council and technical working group (to complements the coordinating body established at EPHI) to oversee public health security.
- Routinely organize and conduct simulation exercises, after action reviews, intra-action reviews (Sim Ex/AAR/IAR) (as relevant) to monitor and evaluate the implementation and effectiveness of legal instruments relating to IHR implementation.
- Conduct systematical gender analysis of health information systems data and legislations on health seeking behavior, service access, service provision and other data related to health emergency response.
- Promote discussions, public engagements and seminars on gender equity and equality in health emergencies as an essential thematic area and disseminate findings of systematic data collection systems to ensure continuous engagement and positioning of the relevance of gender equity and equality for IHR.
- Identify and implement evidence-based, sector-specific interventions for the integration of gender-responsive approaches for health security.
- Update, cost, and implement a gender action plan to address the gender gaps related to IHR core capacities.
- Develop guidelines, strategies, and tools for mainstreaming gender issues in the IHR core capacities.
- Conduct resource mapping and associated financing advocacy analysis/ strategy for the implementation of IHR capacities.
- Organize a high-level advocacy workshop for financing IHR implementation with the presence of government officials, political leaders, partners, and the private sector on a yearly basis and updating the resource, mapping tool of available resources in line with Health Sector Development and Investment Plan (HSDIP) priorities.
- Implement an agile and replicable resource mapping system across all relevant ministries; updated biannually with the NAPHS operational plan, to include regional entities and highlight funding gaps.
- Create a financial tracking system for multi-sectoral IHR-related expenditures; integrated into existing financial management systems, and accessible to key decision-makers.
- Foster and reinforce partnerships among local, national, and international mechanisms for joint financing of timely response to health emergencies.
- Review and make recommendations to ensure the functionality of emergency public financing mechanisms (PFM), particularly the mobilization of funds when needed at the national and subnational levels for relevant sectors.
- Develop SOPs or MoUs to fast-track emergency procurement and service agreements; aligned with existing financial guidelines or approved by the Ministry of Finance.

- Identify and convene key stakeholders to conduct a legal and regulatory review to understand the various legal mechanisms to access sources of domestic funding in the case of a health emergency.
- Capacitate the IHR NFP office through HR recruitment.
- Capacitate the IHR NFP office through capacity building.
- Capacitate the IHR NFP office infrastructure.
- Develop a strategy on the IHR NFP functionality to ensure multisectoral engagement.
- Foster cross border collaboration and coordination
- Develop multisectoral plan and tracking.
- Enhance multisectoral coordination for AMR between (human, agriculture, animal & environment)
- Enhance Internal health sector coordination (AMR, such as universal health coverage (UHC), primary health care (PHC) and health emergencies) as per the One Health Strategic Plan.
- Mapping, mobilizing resources and engagement of all key actors for identified priority actions.
- An external and internal communication policy, strategy and tools should be in place.
- Strengthening the multisectoral monitoring and evaluation framework across all sectors.
- Capacity building activities for farmers and health professionals (human, animal, plant, environment) on AMU/AMR and good practices management
- Expand AMR site scaleup & testing, priority pathogens (sample & volume) and surveillance with microbiology, molecular and genomics surveillance.
- Integrate data management, data repository that include other clinical sites and/or other components of the country's health system. HMIS and the private sector.
- Build the capacity of microbiology laboratories through training, laboratory infrastructure (equipment and supplies) procurement.
- Strengthen the performance of the AST and testing of antimicrobial residues in food, animal, human, and plant sectors.
- Conduct a mapping of surveillance research/academic (public and private in all sectors) including food safety laboratories that can be potentially integrated into the AMR surveillance system.
- Map key stakeholders for MDRO prevention & containment using One Health approach.
- Capacity building on MDRO prevention and containment for health care providers
- Implement a strategy and action plan to prevent and contain MDRO at all levels (embedded in the overall IPC strategy) and develop, endorse, and disseminate a standard protocol for containing MDRO outbreaks.

- Improve health facility capacities to characterize AMR pathogens, identify emerging and re-emerging MRDOs, causing human infections, systematically report to the national level and identify reference laboratories to provide confirmatory testing for exceptional phenotypes and genotypes.
- Implement integrated AMS programs (AMR+IPC+MRDO) and practices in designated health facilities, including training, monitoring, communication, and identification of the required budget.
- Establish systems to ensure AMS elements are included in pre-service and in-service training curricula for health professionals.
- Scale up functioning of AMS program in all major and selected human health facilities.
- Map and review existing legislation, regulations, and policies particularly for food producing animals.
- Strengthen farm waste management associated with AMU/AMR in priority animal sectors (poultry and dairy farm waste management manuals).
- National monitoring system for antimicrobial- pesticide use in plant production including bactericides and fungicides and other.
- Enhance the Capacity of professionals/farmers/all sectors in animal health and agriculture to promote responsible and prudent use of antimicrobials and their capacity building in AMU indicators.
- Enforcement of legislation, and regulations on the import, production, selection, prescribing and sale of standardized antimicrobials and the control of sub-standard drugs.
- Strengthen the integrated surveillance and systematic data/reporting system (interoperable) for priority zoonotic disease under the One Health approach.
- Strengthen the zoonotic diseases Technical Working Groups at national and subnational levels.
- Conduct operational research on priority endemic and emerging zoonotic diseases outbreak events.
- Improve multisectoral risk assessment and PRP Sim Ex capacity on priority emerging zoonotic diseases.
- Strengthen intersectoral zoonotic diseases surveillance data analysis and reporting.
- Review and enforce multisectoral policies, laws, MoUs, SOPs, and Strategic Plans
- Establish multisectoral (human, animal, and environmental health) Rapid Response Teams (RRTs) for emerging and endemic priority zoonotic diseases.
- Set up dedicated emergency funding provisions for management (investigation and response) of high impact zoonotic emerging infectious disease.
- RCCE on priority zoonotic diseases: engage local communities and conduct social mobilization/community awareness.

- Build capacity of the animal control officer workforce in target areas through the provision of necessary equipment for animal capture, euthanasia, and appropriate sample collection.
- Strengthen public awareness systems and mechanisms to Improve knowledge, awareness amongst professionals and stakeholders along the food value chain.
- Implement an integrated food safety and quality system.
- Improve post-harvest management throughout the food value chain.
- Strengthen the prevention, detection and response to food adulteration, illegal food, and street food products.
- Establish regulatory and legal frameworks on biosafety and biosecurity.
- Implement regulatory and legal frameworks of biosafety and biosecurity requirements at laboratory facilities managing high consequence agent and toxins.
- Implement laboratory biosafety and biosecurity certification program.
- Implement monitoring and inventory of high consequence pathogens in all facilities managing high consequence pathogens (research, private sectors, and lower-level facilities).
- Implement a bio risks management system across the laboratory system.
- Build human resources capacity on biosafety and biosecurity across sectors at all levels.
- Provide training to improve knowledge and skills of biomedical engineers on biosafety cabinets certification and negative pressure system verification.
- Implement sustainable academic curricula, continuing education and training programmed for biosafety and biosecurity that align with international best practices.
- Implement a framework for monitoring, evaluation, updating and implementation of biosafety and biosecurity systems at all levels.
- Design solutions to improve immunization data quality, completeness, and utilization, thereby enhancing evidence-based decision-making and actions, as well as obtaining a reliable estimate of vaccination coverage.
- Strengthen and optimize AEFI surveillance systems, including coordination, implementation, and response, for the efficient identification, notification, reporting, investigation, data analysis, causality assessment, and feedback processes.
- Develop strategic and operational plan and implement the plans to achieve optimum vaccination coverage and to address immunization inequity by improving micro-planning and designing tailored strategies, focusing on conflict affected areas, remote rural areas, urban slum, and climate change affected areas to vaccinate the most vulnerable populations.
- Strengthen communication, community engagement and strong public-private partnerships for immunization.
- Introduce of new vaccines (meningitis, measles SIA, malaria, yellow fever)

- Forecast, procure, receive, store, and deploy vaccines and vaccine supplies (Enhance vaccine management and availability at service delivery points by expanding last-mile vaccine delivery to improve access and coverage. This includes addressing gaps in stock monitoring to prevent stockouts, particularly at the health facility level)
- Collaborate with relevant partners to secure resources and investments for vaccines, CCE and vaccine manufacturing.
- Improve effectiveness of immunization campaigns (develop micro-plans and tailored strategies and relevant criteria for mass vaccination campaigns to ensure equity and equality in access to vaccination- including hospitals, community vaccination centers, mobile vaccination sites, home visits to disabled and elderly, etc.
- Implement monitoring and reporting of coverage and safety of vaccines used in mass vaccination campaigns at all levels.
- Share best practices and lessons learned in mass vaccination campaigns, with a focus on ensuring access/availability of vaccines; at national and international forums to engage the country in peer-to-peer learning.

Detect

The proposed priority activities to improve the detection capacity towards the public health security in Ethiopia aim to attain a demonstrable capacity. These include:

- Establish sample referral network and communication systems within and among human, environmental and animal health diagnostic laboratories.
- Implement a strengthened mechanism for transporting animal specimens for priority zoonotic diseases and wildlife diseases.
- Establish an electronic sample referral tracking and result communication system at all tier levels.
- Strengthen specimen referral and transport system including hard-to-reach areas.
- Strengthen a system for data collection, analysis and M&E for specimen referral and transport system, including turnaround time and specimen integrity for human and animal samples.
- Strengthen implementation of QMS, international and national laboratory standards at national, regional, and lower-level laboratories across sectors.
- Allocate adequate resources to improve infrastructure of laboratories at all levels to strengthen the implementation of Quality Management System.
- Implement a framework to exercise, monitor and evaluate established Quality Management Systems at all levels across sectors.
- Establish proficiency testing infrastructure, production, distribution, result collection and feedback system for human and animal health laboratories for priority pathogens.

- Strengthen the national and regional EQA capacity for implementation of EQA program at all levels.
- Furnish and equip the infrastructure of laboratories for testing all priority pathogens including genomic laboratory facilities across sectors.
- Ensure sustainability of supplies for testing all priority pathogens across sectors
- Expand and implement laboratory diagnostic services for testing priority pathogens across sectors.
- Establish mechanisms and protocols for timely and appropriate sharing of information generated by laboratory testing in relevant sectors, especially linking laboratory data with surveillance and risk assessment.
- Map existing laboratory capacity and establish referral networks for priority pathogens.
- Fully Implement tier-specific diagnostic testing strategy at all levels across sectors.
- Implement Diagnostic Network Optimization (DNO).
- Develop a framework for monitoring, evaluation, updating and implementation of tier-specific diagnostic networks.
- Evaluate national surveillance systems and capacities, focusing on their effectiveness in achieving early warning objectives and driving timely decision-making against locally prioritized health risks and hazards.
- Strengthen the decentralized PHEM data management system with technical capabilities, digital reporting tools, and communication infrastructures for real-time data collection, quality monitoring, assurance, and reporting.
- Improve competency of relevant animal and public health workers (e.g., veterinarians, clinicians, laboratorians, PH surveillance officers, etc.) on event detection, assessment, and characterization of prioritized health risks and hazards.
- Foster joint operational research for the development and testing of surveillance best practices, tools, technologies, and innovative approaches for system improvements.
- Enhance the capacity of national and regional veterinary laboratories and community-level clinics to detect, report, and disseminate surveillance data in real-time.
- Strengthen public health event/outbreak detection, characterization, data management, evidence generation and reporting/communication at the primary-level health system.
- Standardize available tools, procedures, and decision-making processes for facilitating prompt health event or emergency verification, characterization, and grading for effective management of health emergencies during the early phase.
- Enhance early warning systems by complementing evidence gathered from various sources to provide up-to-date, interdisciplinary insights about priority impending hazards, vulnerabilities, and threats.

- Reinforce joint investigation and response capacities to facilitate an evidence-based decision-making process supported by objectively measurable criteria and relevant expert opinions.
- Improve the content, pertinence, relevance, and timing of information, data, and evidence reported to decision-makers across relevant stakeholders for better data product consumption.
- Leverage advanced data analysis and evidence generation using data from multiple sources to improve health risk mapping, resource estimation, and for costing related impact of health events or emergencies.
- Improve the frequency of surveillance data publication, information, and data sharing among the animal and public sectors.
- Establish national multi-sectoral workforce registries of competent and practicing personnel and collect key performance indicators regularly.
- Map and establish a collaboration agreement with national and international stakeholders/sectors to facilitate mobilization and deployment of emergency response teams.
- Adopt and review the multisectoral workforce strategy regularly.
- Incorporate appropriate incentive packages and strategies to attract, train and retain competent personnel to meet national and subnational needs within the multisectoral workforce strategy.
- Update the resource mapping and sustainable financing strategy for the implementation of Multisectoral Workforce Strategy
- Use the data obtained from the workforce mapping to identify gaps in the workforce for evidence-based planning.
- Create monitoring frameworks to address public health workforce preparedness needs (quantity, quality) at national and subnational levels.
- Continue and expand CPD trainings and retention programmed for specialized health personnel involved in IHR implementation in hard-to-reach areas.
- Develop a "One Health" capacity-building program that equips professionals at primary/woreda levels with the skills and resources needed in epidemiology, case management, and laboratory services.
- Build mechanisms that ensure strict adherence to nationally or internationally recognized standards for competency-based training programmed.
- Expand current public health and FETP training to include refresher courses alongside field epidemiologists, regular in-service programs and continuing professional development programs.
- Mobilize resources to ensure a trained workforce for all IHR relevant emergencies/hazards.
- Lead or participate in peer-to-peer initiatives to strengthen capacities globally.
- Implement a multisectoral surge workforce strategic plan for health emergencies at all levels.

- Implement training packages and conduct training before health emergencies for the multisectoral surge workforce at all levels.
- Use data driven planning tools to review and evaluate the performance of the surge workforce.

Respond

- The proposed activities under this thematic area aim to have at least a demonstrated response capacity for health security threats. These includes:
- Create an enabling environment for coordination and collaboration among stakeholders to conduct risk assessment, EPRP development, financing, its implementation, and routine monitoring and evaluation through a whole-of-society approach.
- Standardize procedures and guidelines for risk and readiness assessments, emergency preparedness plan preparation, operational contingency planning, and communication among relevant stakeholders.
- Improve staff competency and system-level capability for effective risk profiling, RRAs, readiness assessment, and determination of priority risks for health emergency management.
- Develop, review, update, and test hazard-specific operational contingency plans for high-priority and imminent risks based on readiness assessment (s) and prioritized readiness anticipatory actions.
- Develop a strategy for resource mobilization, sustainable emergency financing, and routine financial arrangements for implementing preparedness, system development, and risk mitigation.
- Standardize PHEOC operations by establishing a legal framework and relevant platforms and determining a relevant model for PHEOC implementation based on the national context.
- Ensure proper functionality of PHEOCs using PHEOC handbooks, the equipping of contact centers, and proper staffing and training using the One Health approach.
- Networking of public health emergency operations centers (PHEOCs) to ensure interoperability and harmonization of actions and interventions during preparedness and emergency management.
- Strengthen routine monitoring and evaluation of PHEOC capacities to track their operational status and generate evidence for the decision-making process and program improvement.
- Scale up and decentralize PHEOCs further down to a strategically selected sub-regional structure and develop a strategy for service continuity for PHEOC operations.
- Establish a PHEOC mentorship and coaching system to enhance the functioning capability of regional PHEOCs.

- Develop a strategy for resource mobilization, sustainable emergency financing, and routine financial arrangements to build, equip, maintain, and operate PHEOCs.
- Improve the system-level capability and individual competencies of PHEOCs for effective coordination of health emergency responses.
- Enhance the effectiveness of the health Incident Management System (IMS) through generating evidence using simulation exercises, IAR/AARs/7-1-7/EAR, and their application for the decision-making process.
- Improve the awareness and competency of staff on the emergency response coordination mechanism through awareness creation, training, SimEx,, and a fellowship program.
- Ensure a safe and secure working environment from misconduct during health emergency response operations, including sexual exploitation and abuse of vulnerable populations, staff harassment, etc.
- Improve the effectiveness of surge team mobilization and deployment through regular monitoring and generating evidence using simulation exercises, IAR/AARs/7-1-7/EAR, and their application for decision-making.
- Ensure ownership of human resources for health management coordination during health emergencies.
- Ensure ownership of human resources for health management coordination during health emergencies.
- Strengthen surge team capacity by improving the competency of RRTs for health emergency management by standardizing capacity building materials and undertaking trainings.
- Improve human resource management and retention mechanisms to improve experts' motivation during their engagement in health emergency management, which in turn improves health service delivery.
- Establish a governance mechanism with standard procedures and regulatory pathways for the use of medical countermeasures in line with health emergency grading for effective mobilization and delivery of required logistics and supplies during health emergency responses.
- Institutionalize regular monitoring of quantity and quality control of the strategic stockpile of essential medical countermeasures and conduct regular testing of policies and procedures using Sim Ex, AAR, IAR, and EAR/7-1-7 (based on their relevance) for evidence generation and continuous system improvement.
- Improve the effectiveness of the supply and logistics management system by generating evidence through routine readiness and functionality assessment and program monitoring and evaluation for decision-making.
- Develop a mechanism to support the fast tracking and expansion of research capacities during health emergencies to gather the latest evidence and communicate with decision-makers.

- Improve policy, practice, and guidelines using contextual evidence generated through cross-sectoral collaborative research on health emergencies with joint action to utilize evidence for decision-making.
- Improve the competency of relevant staff across sectors through capacity building and the incorporation of RD&I into undergraduate and postgraduate studies in relevant programs.
- Develop a standard joint preparedness and response training program for both public health and security authorities to effectively deal with public health events at all levels.
- Create a joint platform for collaboration and information sharing between public health and security authorities and other relevant stakeholders.
- Prepare and implement a curriculum for a training module on different joint investigation issues.
- Build capacity to provide training (international) and experience sharing for national staff from public health and law enforcement sectors on the investigation and, management of joint responses to biological threats and conduct drill exercises.
- Conduct assessment of the coordinated joint detection and response plans.
- Assess and improve the diagnostic capacity of existing laboratories in public health and law enforcement sector for forensic examination of biological threats.
- Review and evaluate case management guidelines for priority infectious diseases, patient referral protocol, transportation of potentially infectious patients and document the findings.
- Create an integrated data system at all levels of health-care facilities in both urban and rural areas by reviewing and inclusion of all data points in OPDs.
- Enhance capacity to undertake detailed investigation of epidemics death audits and documentation at health facilities (public and private).
- Institutionalize the mental health and psychosocial support for future public health emergency preparedness and response activities.
- Disseminate case management guidelines and SOPs for the management and transportation of potentially infectious patients at the subnational level.
- Conduct regular multidisciplinary Sim Ex/AAR/IAR (as relevant) with participation from all levels of health service delivery, and update case management guidelines and SOPs based on the recommendations.
- Consider specific requirements for vulnerable groups including children, women, the elderly, forcibly displaced people, etc. and ensure they are included in case management processes, guidelines, and SOPs for relevant IHR hazards.
- Revise, evaluate and update the National EHS package and its draft guidelines for inclusion of lessons learnt from recent simulation exercises and After-Action Reviews for implementation at the national and subnational level.
- Develop and test mechanisms for the protection of medical staff, effective staff rotation and optimum IPC methodologies to ensure continuity of EHS through maintaining safe staffing levels.

- Train health workers and decision-makers, in their roles to maintain EHS during emergencies and develop mechanisms to support EHS continuity.
- Conduct risk informed planning in relevant sectors to identify and list critical operations and functions that need to be continued during emergencies to the support the delivery of EHS.
- Establish and test well-functioning, safe, effective, quality, and equitable EHS delivery, including access to primary care, before, during and after emergencies.
- Develop and test mechanisms for monitoring EHS continuity before, during and after emergencies, including identification of vulnerable groups who need to be specially considered during specific types of emergencies.
- Develop a guideline for critical health service operations/functions that need to be continued during health emergencies in the health ministry and all relevant related departments at the national and subnational levels.
- Identify private and non-governmental institutions that can be mobilized used during emergencies and agree on roles and responsibilities before, during and after emergencies to ensure continuity of EHS alongside emergency service provision.
- Develop business continuity plan of essential functions that support the continuity of EHS by relevant sectors including private and nongovernment institutions.
- Advocate to have dedicated structure and budget for IPC at national, regional and HCF levels.
- Develop, review, and update national IPC guidelines, SOPs job aids, and other required technical documents.
- Build the capacity of the IPC focal persons and HCWs by providing basic and targeted IPC and WASH training at all levels.
- Monitor and support HCFs to enable them to achieve the WHO minimum requirements for IPC.
- Strengthen national M&E system for the IPC program.
- Develop a national strategic plan for HCAs surveillance, including endemic HCAs, antimicrobial resistant pathogens and pathogens prone to infectious disease outbreaks.
- Increase the number of secondary and tertiary hospitals conducting HCAs surveillance to 25% and provide timely and regular feedback to senior management and health workers.
- Build the capacity of health professionals responsible for HCAs surveillance activities on basic epidemiology, surveillance, and IPC.
- Strengthen the capacity of selected secondary and tertiary hospitals laboratories and provide resources to enable them to identify and report HCAs through a national surveillance system.
- Coordinate the surveillance process with regional surveillance networks and provide timely feedback reports to relevant stakeholders on the national situation of HCAs.

- Assess the current national status of healthcare facilities in relation to WASH infrastructure and services and availability of required supplies, materials and equipment for IPC and document gaps.
- Improve implementation of the minimum requirements of staffing, workload, and bed occupancy standards to improve IPC in healthcare facilities.
- Update national building standards, standards for safe water, sanitation, hygiene, waste, and clean energy services for healthcare facilities to enable compliance with IPC measures.
- Support implementation of IPC improvement actions at all healthcare facilities, based on the assessment findings (using the IPCAF and complementary WASH FIT tools or national equivalents).
- Strengthen the RCCE system capacity at all levels through development of a strategy, guidelines, SOPs, and trainings.
- Strengthen coordination platform with stakeholders, partners, and donors to enhance RCCE activities.
- Digitalize the RCCE system to ensure systematic exchange of information with the existing One Health system to enhance media scanning, infodemics management, community engagement and feedback, dissemination of health messages, documentation, and achievements.
- Strengthen monitoring and evaluation systems to assess the RCCE implementation capacity at all levels.
- Allocate dedicated resources for an effective RCCE system at the national and subnational levels.
- Apply evidence based and theory driven RC intervention during emergency preparedness and response phases.
- Reach targeted communities with tailored and inclusive RCCE message and materials.
- Improve mechanisms for media engagement across all sectors.
- Engage and advocate decision makers and influencers on major RCCE interventions.
- Engage community representative and social networks to improve community ownership during PHsE.
- Empower the community /household to plan and implement Public Health Emergency Management (PHEM) through an innovative approach (high-priority districts with multiple PHEs/outbreaks)
- Strengthen capacity building mechanisms for the multisectoral community health workforce and community engagement in the management of health emergencies and resilience building.
- Strengthen mechanisms for systematic community engagement interventions during public health emergencies.

Others

Under the action packages of points of entry, chemical events, and radiation emergencies, the

- Target is to achieve a demonstrable capacity based on the IHR requirements.
- Some of the activities include Capacitate stakeholders with physical presence at designated points of entry on cross border communicable disease prevention and control.
- Assess IHR core capacity requirements at the designated PoE and fill the gaps based on the assessments.
- Establish technical taskforce/technical working group involving all relevant stakeholders and organize regular meeting and information sharing.
- Update and revise existing PoE CDC guideline and SOPs towards the multi hazard approach and train staff at all designated PoE.
- Integrate all designated PoE into the national surveillance systems at least for biological hazards and at most for all hazards with the involvement of relevant sectors with guidance and SOPs for responding to public health events.
- Establish surveillance system for tracking the burden of diseases due to travel and international passengers.
- Formalize agreements with neighboring countries as well as within Ethiopia between different sectors through developing TOR/MoUs for rapid and secured sharing of data and information on health risks and emergency events at and around PoE, at ground crossings in high-risk areas and where communities adjacent to borders are deeply integrated.
- Enhance the laboratory capacity for the points of entry.
- Establish a surveillance system for vector-borne diseases at designated PoE.
- Ensure that multi sectoral health emergency contingency plans are well integrated into other emergency response plans at the PoE, at subnational and national levels.
- Conduct and document SimEx/AAR/IAR (as relevant) at least annually at premises of designated PoE for entry/exit screening, communication, testing, transport for referral hospitals, etc. using risk-based scenarios with multisectoral stakeholders.

- Maintain good collaboration with regional and global networks/agencies through the provision of information to international travelers and continuous publication of travel health advice and notice (HAN).
- Provide regular updates to timely initiate relevant international travel related measures commensurate with the risk level and with multisectoral involvement using an all-hazard approach.
- Establish a surveillance system and 24/7 reporting mechanism for community reports (poison center free hotline) and health system report (using electronic reporting tool)
- Capacity building on chemical incident surveillance and response, and chemical management for PHEM officers and relevant sectors.
- Conduct risk assessments for chemical agents in the nation and develop preparedness and response plan based on the findings.
- Conduct periodic monitoring and evaluation, and Sim Ex to assess the surveillance and response status.
- Establish and strengthen diagnostic laboratories, poison centers and poison information services at national and sub national level.
- Develop chemical event response plan and chemical waste management plan at national level, sub-national levels with the involvement of relevant stakeholders.
- Develop/revitalize the national coordination taskforce and the technical working groups involving relevant stakeholders and organize regular meetings.
- Conduct high level advocacy workshop (s), risk communication and regular information dissemination through electronic bulletins.
- Develop an MOU for the regular information sharing with relevant stakeholders regularly on the risk and threats that are potential for radiation emergencies.
- Conduct a high-level advocacy workshop for awareness creation at national level.
- Train health and non-health actors on surveillance, case management and emergency response for radiation and nuclear emergencies
- Develop and conduct emergency response drills, Sim Ex/AAR/IAR (as relevant) on radiation emergencies and update the response plan, mechanisms, and guidelines accordingly.
- Establish/designate at least one health facility with capacity to manage patients of radiation emergencies.
- Procure and establish access to a national stockpile of medical supplies required for nuclear and radiation emergency countermeasures (as recommended by the WHO policy advice on stockpiles, 2023), and develop SOPs for their use, storage, deployment, and replenishment.
- Respond to radiological threats with a joint risk assessment, investigation, and implementation of the response plan.

CHAPTER 6. COSTING AND FINANCIAL PLAN

6.1 Costing Strategy and Assumptions

The costing of this strategic plan is based on the existing financial governance regulations of the country. The costing inputs were generated by using the Master NAPHS Planning and Costing Tool Questionnaire and inserted in the appropriate cells in the tool. The detailed estimation for basic inputs for costing is presented in Appendix E.

The following points were taken into consideration during the estimation of the cost:

- The costing inputs for the calculation of training, meetings, and workshops
- The costing inputs for the calculation of international and national consultants
- The costing inputs for the calculation of salaries of different job titles
- The costing inputs for the calculation of supervisory visits
- The costing inputs for calculation of procurement of medical supplies and other logistics/ materials (lump sum)
- The current values (selling price at local and international market) for supplies and equipment.

In addition, the implementation scale (national, regional, zonal, woreda), cost categories, and name of the implementing institutions, department of organizations, and other unit costs were standardized and defined.

6.2 Budget and Financial Plan

A total of 109,138,827,418 Birr (1,928,254,648 USD) is required for the implementation of the proposed activities under the 19 action packages including immunization, which is accounts for 68.9% of the total cost over the next five years. It is anticipated that for most of immunization activities the budget sources are already identified. Consequently, for the remaining eighteen (18) action packages an estimated 33,917,818,147 Birr (593,256,855 USD) is required. The detailed budget breakdown for each activity is presented in the planning matrix. The high population of Ethiopia, which is around 12 million (the second most populous country in Africa); the limited capacity in the country for preventing, detecting, and responding to health security threats; the large geographical area; recurrent outbreaks and health threats; and the potential high risks for emergencies and other factors are taken into consideration in the estimated high but reasonable costs. The summary of the budget breakdown is presented in Table 7 below.

Technical Area	Cost estimate per year (Birr)					Total estimated cost (Birr)	Total estimated cost (USD)
	2024	2025	2026	2027	2028	TOTAL BIR	TOTAL (USD)
P1. Legal instruments	23,461,550	35,101,900	18,727,200	20,684,500	774,100	98,749,250	1,744,693
P2. Financing	14,193,020	48,790,999	44,012,155	28,558,760	26,894,660	131,759,834	2,327,920
P3. IHR coordination, IHR-NFP functions and advocacy	89,024,874	92,725,130	89,297,380	69,722,780	68,310,980	409,081,144	7,227,608
P4. Antimicrobial resistance (AMR)	20,257,350	537,973,506	47,206,150	460,831,556	39,331,450	1,105,600,012	19,533,638
P5. Zoonotic diseases	1,175,341,600	1,254,560,850	1,168,879,050	1,167,940,650	1,166,879,050	5,933,601,200	104,834,314
P6. Food safety	29,551,137	23,984,150	20,803,650	20,803,650	20,803,650	115,946,237	2,048,527
P7. Biosafety and biosecurity	20,391,450	102,760,200	32,994,650	24,330,500	44,140,500	224,617,300	3,968,518
P8. Immunization	4,648,956,893	18,737,415,303	16,615,011,147	17,550,269,264	17,669,356,663	75,221,009,271	1,328,997,793
D1. National laboratory systems	1,072,364,100	1,044,139,000	3,033,372,850	707,215,750	580,528,150	6,433,553,850	113,667,431
D2. Surveillance	52,824,750	856,988,405	518,641,328	208,622,374	196,637,024	1,833,713,881	32,397,886
D3. Human resources	32,360,200	128,216,530	120,127,580	116,938,180	116,579,980	514,222,470	9,085,235
R1. Health emergency management	503,801,800	1,405,023,000	506,937,400	515,701,000	478,365,700	3,409,828,900	60,244,540
R2. Linking public health and security authorities	4,132,800	24,028,300	21,524,800	21,524,800	21,524,800	92,735,500	1,638,442
R3. Health services provision	23,232,400	2,734,805,060	2,588,281,400	2,549,665,800	2,561,542,900	10,455,729,660	184,730,859
R4. IPC	829,467,854	76,252,046	835,722,146	32,077,246	29,638,346	1,803,157,638	31,858,021
R5. RCCE	90,248,182	131,642,382	107,249,532	115,159,282	83,143,982	527,443,360	9,318,820
PoE: Points of entry and border health	67,688,216	160,078,116	140,141,666	131,352,616	131,352,616	630,613,230	11,141,616
CE. Chemical events	21,989,100	45,080,520	41,396,970	29,554,270	18,059,770	156,080,630	2,757,618
RE. Radiation emergencies	11,925,800	12,839,300	7,404,150	5,683,900	3,530,900	41,384,050	731,170
Total	8,731,213,076	27,452,404,697	25,957,731,204	23,776,636,878	23,257,395,221	109,138,827,418	1,928,254,648

Table 8. Total Cost of NAPHS per Year of Implementation for the 19 Action Packages (2019–2023)

6.3 Cost Breakdown by Core Components

Of the total estimated cost in the five-year period, the highest budget (76.3% of total cost) is for the proposed activities aiming to improve the capacity to prevent health security threats (83,240,364,249 birr/1,470,683,010 USD). This is followed by the costs associated with the capacity to respond and to detect as shown in Table 8. Of the total cost for the prevention capacity, the majority is for the proposed activities under immunization, followed by zoonotic disease and AMR action packages.

Component	2024	2025	2026	2027	2028	TOTAL (BIRR)	TOTAL (USD)
Prevent	6,021,177,874	20,833,312,038	18,036,931,382	19,343,141,660	19,036,491,053	83,240,364,249	1,470,683,010
Detect	1,157,549,050	2,029,343,935	3,672,141,758	1,032,776,304	893,745,154	8,781,490,201	155,150,552
Response	1,450,883,036	4,371,750,788	4,059,715,278	3,234,128,128	3,174,215,728	16,288,895,058	287,790,682
Other	101,603,116	217,997,936	188,942,786	166,590,786	152,943,286	828,077,910	14,630,403
Total	8,731,213,076	27,452,404,697	25,957,731,204	23,776,636,878	23,257,395,221	109,138,827,418	1,928,254,648

Table 9. Summary of Budget Breakdown by Core Components of NAPHS

The estimated total cost by each implementation year, except for the first year (8%), shows a stable yearly trend of 25%, 24%, 22%, 21% of the total cost in a period from 2024–2025 (indicated in the figure 12 below)

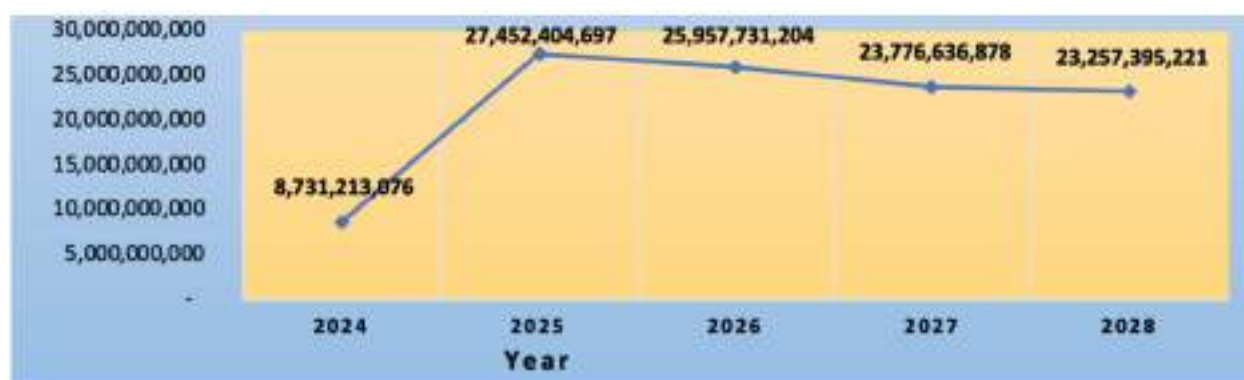


Figure 13 NAPHS Cost per implementation Years, 2024-2028

6.4 Cost Breakdown by Technical Areas

Excluding immunization, the seven other action packages under the capacity to prevent health security threats would require an estimated cost of 8,019,354,978 birr (141,685,217 USD) over a five-year implementation period. Of which, the majority is for zoonotic diseases (104,834,314 USD) and for AMR technical areas (19,533,638 USD). The NAPHS cost breakdown for the prevent, detect, response and others is indicated in Figures, 13, 14, 15 and 16, respectively.

The primary cost drivers under the detection component are the national laboratory system, surveillance, and workforce development action packages, in which about 73% of the total costs under detection goes for national laboratory systems (Figure 14).



Figure 14 NAPHS Cost Breakdown by Technical Areas, Prevent

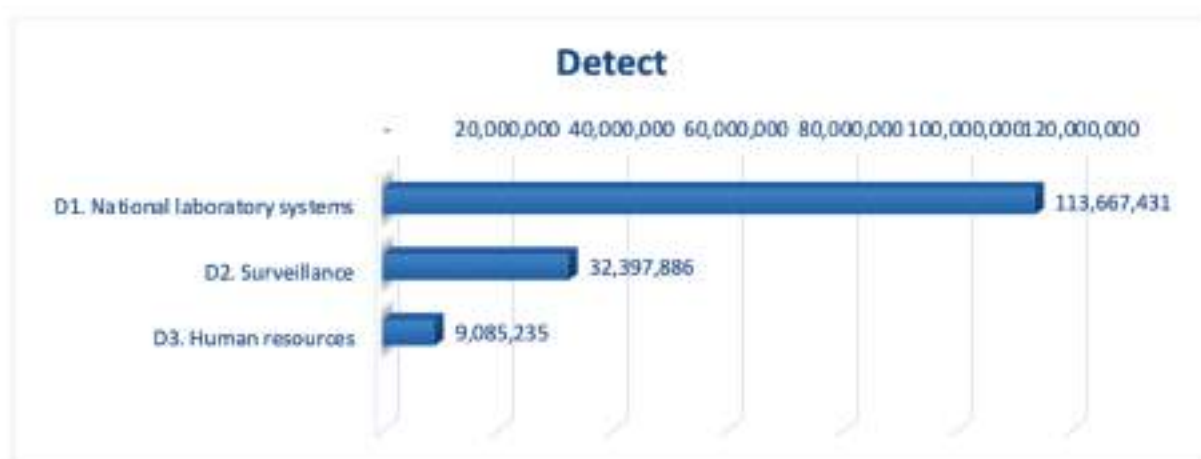


Figure 15 NAPHS Cost Breakdown by Technical Areas, Detect

Out of the five components under the response, about 64% of the total cost goes for health services provision followed by health emergency management (21%). Again, this is followed by infection prevention and control, and risk communication and community engagement activities.

For the remaining IHR related hazards (travel and border health, chemical events, and radiation emergencies), the activities proposed to implement the travel and border health technical area are the main cost drivers which accounts about 76% of the total costs under this component, followed by chemical events (Figure 16).



Figure 16 NAPHS Cost Breakdown by Technical Areas, Response

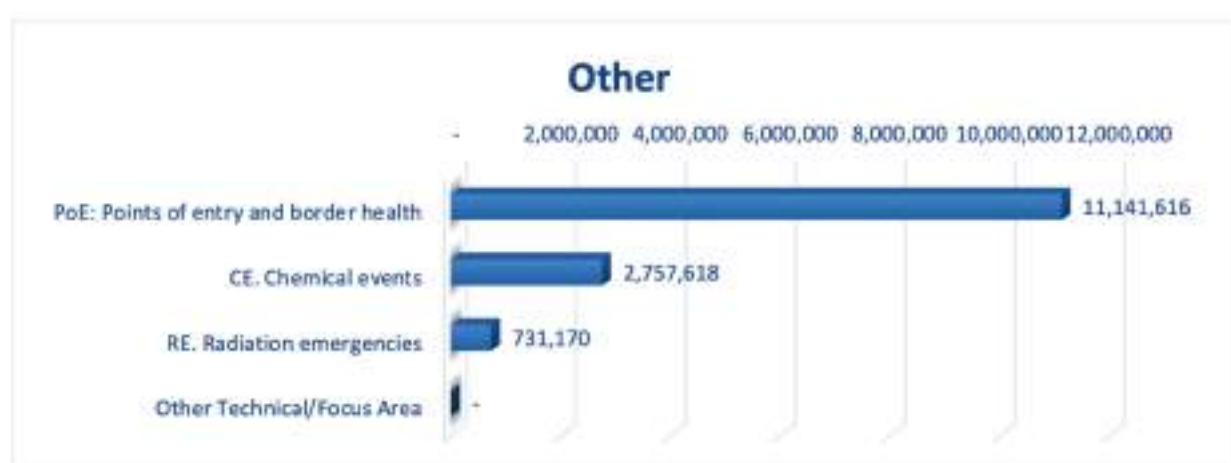


Figure 17 NAPHS Cost Breakdown by Technical Areas, Others

6.5 Budget Summary

Of the total estimated cost, the highest budget item is for proposed activities aiming to improve the capacity to prevent health security threats, followed by the capacity to respond and detect.

The main cost driver of the total budget goes for the capacity to prevent, which is almost covered by the immunization technical area (around 68.9%). The majority of which is for the routine vaccination program for measles, polio, meningitis, and yellow fever.

These are supported mainly by Gavi, The Vaccine Alliance and do not include proposed vaccination activities for rabies, anthrax, and animal vaccination.

The main cost drivers of the 18 technical areas (excluding immunization) are health services provision (9.6%), national laboratory systems (5.9%), zoonotic diseases (5.4%), health emergency management (3.1%), surveillance (1.7%), infection prevention and control (1.7%) and Anti-microbial resistance (1.0%).

The major cost drivers based on the nineteen (19) technical areas are also indicted in Figure 17.

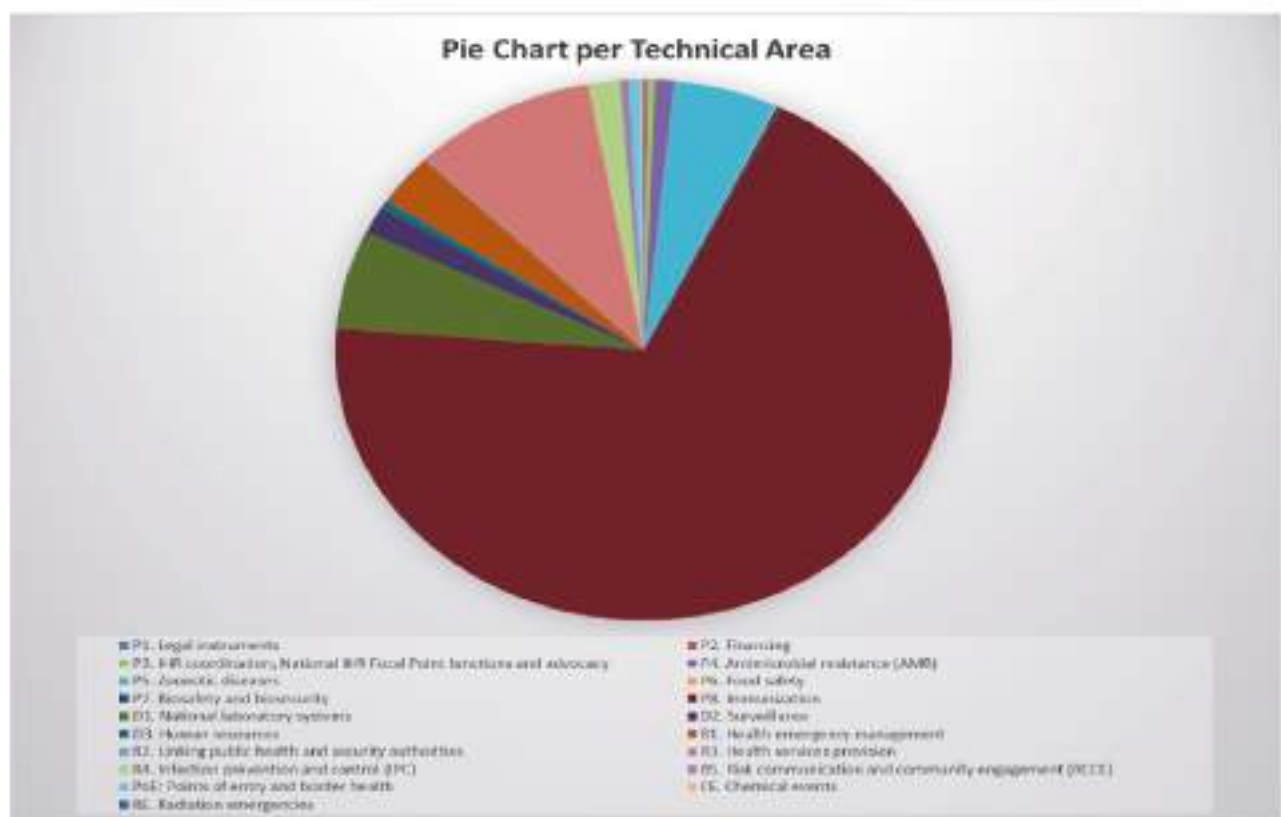


Figure 18 The Main Cost Drivers based on the JEE Thematic Area

Likewise, more than eighteen (18) major cost categories were identified during the multi-sectoral planning and costing that enhances the health security capacities in the country. A summary of the main cost category for all the thematic areas is provided in Fig. 18.

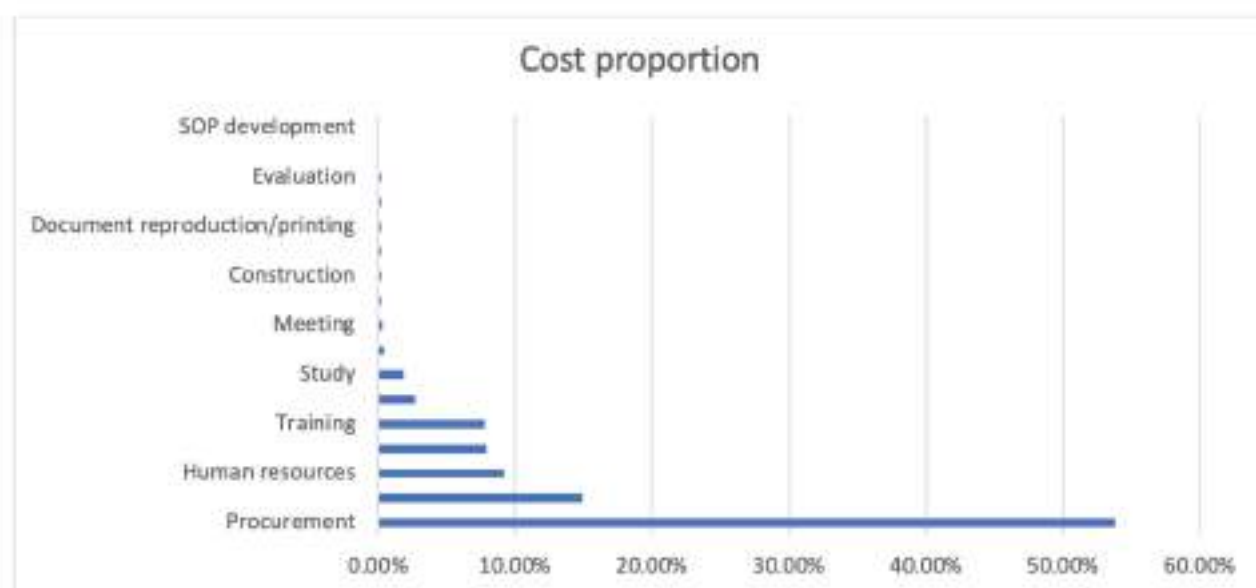


Figure 19 Proportions of the Main Cost Categories

CHAPTER 7. MONITORING AND EVALUATION

7.1 NAPHS monitoring and Evaluation Framework

The monitoring and evaluation logic model for NAPHS was adapted from the Public Health Emergency Management (PHEM) manual considering the four major strategic pillars of NAPHS as indicated in Figure 19 below. In this framework, governance, human resource, financial Resource, physical resources, and SOPs are inputs. The early warning, communication, preparedness, and response activities were taken as processes and the outputs of the performances would be the results under prevent, detect and response. The outcomes would be improved health services and systems and decreased morbidity and mortality, and the impact will be improved health security in the country.

INPUT	PROCESS	OUTPUT	OUTCOME	IMPACT
Governance Human Resource Financial Resource Physical Resource SOPs	Recruiting Mobilizing resources Develop Sops coordination mechanism NAPHS implementation	IHR Capacities to: Prevent, Detect, Respond and IHR related hazards and PoE built.	Early detection, rapid response improved Improved health care System and recovery Disease spread and transmission decreased	Decreased Morbidity and Mortality Improved health Security and population Health

Figure 20 Showing Monitoring and Evaluation logic model for NAPHS

7.2 Monitoring and Evaluation Plan

The objective of the Monitoring and Evaluation (M&E) Plan is to assist the Government of Ethiopia (GOE) in achieving full compliance with the International Health Regulations (2005) by overseeing the progress of initiatives across the 19 Technical Areas outlined in the National Action Plan for Health Security (NAPHS). These endeavors are recognized as significant contributors to enhancing the nation's health security capacity scores as assessed in the Joint External Evaluation (JEE).

The monitoring process will be managed by the Ethiopian Public Health Institute (EPHI) IHR and One Health Office, the IHR National Focal Point (NFP). Aligned with the global IHR M&E Framework, this plan integrates key resources/tools including the WHO Benchmarks, the IHR State Parties Self-Assessment Annual Reporting (SPAR) Tool, alongside insights from After Action Reports (AARs) and Simulation Exercises (Sim Ex).



Figure 21 IHR M&E Frameworks

The M&E Plan Follows three interrelated activities.

I. Monitoring Implementation of the NAPHS: To monitor the implementation of NAPHS activities the following method or mechanism will be engaged:

A. Establishment of Technical Area focal persons: To foster a stronger sense of ownership among stakeholders engaged in implementing the NAPHS, to ensure consistent reporting, and to strengthen the national M&E strategy dedicated Focal Persons (FPs) of the respective sectors will be assigned.

Their primary responsibility will be to lead initiatives within their designated Technical Areas, facilitating communication and collaboration within their ministries and engaging relevant stakeholders. By appointing sectoral focal Persons, we aim to enhance accountability and commitment throughout the implementation process. They will serve as key conduits for reporting and feedback, contributing to the overall effectiveness of the NAPHS and supporting the national M&E strategy. This approach will strengthen Ethiopia's ability to proactively address health security challenges.

B. Self-reporting by implementing sectors: To ensure comprehensive monitoring of NAPHS activities and to integrate input from stakeholders and Technical Area Focal Persons, a collaborative self-reporting monitoring tool will be employed. This tool will enable stakeholders and FPs to contribute their insights directly, streamlining the tracking process for NAPHS activities.

Through this self-reporting mechanism, implementing sectors or stakeholders will have the opportunity to provide essential data on key variables such as progress, funding updates, and challenges. This input is crucial for the successful implementation of the NAPHS, as it offers valuable insights into the dynamics of each initiative and allows for timely adjustments to be made as needed. By harnessing the collective knowledge and experience of stakeholders and FPs, this approach ensures a more transparent and inclusive monitoring process, ultimately enhancing the effectiveness of NAPHS implementation.

C. Technical Area Review Meetings: Scheduled one-on-one meetings will be conducted regularly between the monitoring team and each line ministry or implementing partner to delve into the specific technical areas in which the ministry or partner is actively involved. These meetings serve as a platform for in-depth discussions and assessments of the contributions made by the ministry or sectors to the designated technical areas.

Collaborating closely with the Focal Person within each ministry, the NAPHS monitoring team will facilitate the organization of representatives for each Technical Area from that ministry. This collaborative effort ensures comprehensive coverage and representation across all relevant technical areas.

During these review meetings, the monitoring team will engage with stakeholders to evaluate progress, address challenges, and explore opportunities for enhancement within each Technical Area. By fostering open dialogue and collaboration, these meetings play a vital role in ensuring alignment with the objectives of the NAPHS and driving forward the implementation process effectively.

During technical monitoring sessions, discussions will be directed by monitoring data to assess NAPHS activity execution. Successes, problems, gaps, and improvement opportunities will be identified to guide future planning within the technical areas. This tactic aims to enhance partnership involvement and improve the accuracy of subsequent reports. Additionally, it will facilitate the utilization of various reporting channels employed by different NAPHS stakeholders.

2. Identifying & Adjusting Priority Activities

A. Quarterly or Mid-year review meetings: A quarterly review session held through the calendar year will involve representatives from all line ministries (including Focal Points), implementing partners, and key stakeholders. The aim of this gathering is to exchange updates on NAPHS implementation progress, address challenges, and provide status updates on planned activities. Best practices will be documented and disseminated among partners, enhancing awareness among NAPHS stakeholders regarding advancements toward JEE recommendations and fostering stronger cross-sectoral collaboration.

B. Annual review meetings: Annual review gathering will leverage findings from the quarterly review and other progress updates. Documents such as the WHO Benchmarks and SPAR, along with outcomes from Sim Ex and AARs, will shape this process. Attendees will include technical experts, managers, administrators, ministers of the NAPHS implementing partners, and representatives from development partners.

C. Annual operational NAPHS planning meeting: Recommendations from this annual review forum will aid in the selection and prioritization of activities for the following year, informing subsequent planning for NAPHS implementation.

3. Documentation and Dissemination of Results

A. Monthly progress reports: The monitoring team will provide progress and updates on NAPHS implementation. These reports will be shared with

- The implementing sectoral Ministries.
- Relevant development partners
- Other identified stakeholders.

B. Quarterly Newsletter/ National Health Security Bulletin: This written publication will offer concise updates on the progress of NAPHS implementation to stakeholders. Circulated via email, the newsletter will reach line ministries, sectors, and other partners involved in supporting NAPHS implementation.

C. Publications and Conferences: The monitoring team will collaborate with key stakeholders to develop and disseminate publications aimed at the broader community, both nationally and globally, to highlight Ethiopia's advancements in NAPHS implementation. These publications may encompass original scientific works, contributions to bulletins, and conference papers. They will highlight innovations, successes, lessons learned, best practices, and ongoing progress toward fulfilling JEE recommendations in alignment with the IHR 2005

7.3 Key Performance Indicator (KPI) and Target

The Key Performance indicators of the national action plan for health security with regards to the nineteen (19) technical areas are presented in Table 9 below. The KPIs are across all the five years 2024/25 through 2028/29.

In this National Action plan for Health Security a total of 200 Key Performance indicators are identified to evaluate and measure the progress changes in outcome, output, and process indicators which were determined based on selecting criteria. These criteria include relevance, availability of data source, measurability, sensitivity, national and international priority health interventions, and requirements. The period for data collection and analysis varies for each indicator. During the selection and development of this KPIs attempts were made to link with the already developed strategic plans such as the Ethiopian Public Health Institute SPM-III, Strategic Plan for Health Laboratory System in Ethiopia, Strategic Plan for Public Health Emergency Management (PHEM) in Ethiopia and other sectoral documents. Measurement of the impact indicators follows the IHR M&E frameworks including JEE results.

JEE Indicator	Key Performance Indicators	Unit	5 years	Year				
				24/25	25/26	26/27	27/28	28/29
Prevent								
Legal instrument and Gender	Number of legal analyses conducted for selected Subnational levels?	Numb er	2	1	1			
	Are legal instruments developed based on the assessment at a national level?	Yes/N o	Yes	Yes	Yes			
	Number of advocacy and sensitization session on the legal instrument's	Numb er	10	2	2	2	2	2
	Is national multisectoral public health security council and TWG established?	Yes/N o	Yes		Yes			
	Is gender analysis of health information system data and legislation conducted	Yes/N o	Yes	Yes	Yes	Yes	Yes	Yes
	Number of developed guidelines and strategies and tools for gender implementation on IHR	Numb er	3	1	2			
Financing	Number of resource mapping done for IHR implementation	Numb er	5	1	1	1	1	1
	All IHR resource mapping tool automated	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	% financial Resource mobilized for IHR core capacity Implementation	%	100	100	100	100	100	100
	% financial resource used for IHR core capacity Implementation	%	100	100	100	100	100	100

Table 10 NAPHS Key Performance Indicators (KPI)

JEE indicator	Key Performance Indicators	Unit	5 years	Year				
				24/25	25/26	26/27	27/28	28/29
	Clearly dedicated /earmarked emergency funds established	Yes/No			Yes			Yes
	Types of new procurement system operated during public health emergency.	Number	As per request					
	New type of procurement system established for public health emergencies	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes
	Emergency financing effectiveness	%	100	50	70	90	100	100
IHR coordination, National IHR Focal Point functions and advocacy	Recommendations generated for improvement from Sim Ex/AAR/IAR conducted by the IHR NFP	%	100	100	100	100	100	100
	Actionable strategies and action plans developed	Number	2		2			
	Revised IHR/One Health multisectoral governance structure documents developed and approved	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes
	Establishment of a comprehensive multisectoral IHR coordination platform at ministerial level	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes
	Establishment of regional IHR coordination mechanism(s)	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes
	Regular conduct of quarterly review meetings for the multisectoral IHR coordination mechanisms at both national and subnational levels.	Number	20	4	4	4	4	4
	Cross-border collaboration agreements signed or renewed with neighboring countries within the specified period.	Yes/No	Yes		Yes	Yes		
	Regional One Health taskforces established and sustained within specified regions	Yes/No	Yes		Yes	Yes		
	Enhanced operational efficiency of IHR NFP	%	100	100	100	100	100	100
	Improved timeliness and quality of IHR NFP reporting	%	100	100	100	100	100	100
	Increased operational capacity of the IHR NFP office	%	100	100	100	100	100	100
	Increase in national and regional health security capacity	%	100		75	85	90	100

Table 10 NAPHS Key Performance Indicators (KPI)

JEE indicator	Key Performance Indicators	Unit	5 years	Year				
				14/25	25/26	26/27	27/28	28/29
Antimicrobial resistance (AMR)	AMR coordination mechanism put in place and function.	Yes/No	Yes				yes	yes
	Key actors identified; mapped & resource mobilized for AMR	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes
	Number of monitoring and evaluation report produced	Number	5	1	1	1	1	1
	Number of health professionals and farmers trained on AMR	Number	200	40	40	40	40	40
	Number of AMR surveillance sites increased by	Number	15	15	15	15	15	15
	Generate integrated AMR surveillance data captured through HMIS	%	100		100	100	100	100
	Number of healthcare providers trained for MDRO prevention and containment	Number	100	20	20	20	20	20
	Number of health facilities reporting functional (AMS+IPC+MDRO) system	Number	300	60	60	60	60	60
	Curriculum developed for AMS preservice and Inservice training	Yes/No	Yes		Yes			
	Number of health facilities with functional AMS programs	Number	20			20		
	Legislation, regulation, end policies identified for food producing animals	Yes/No	Yes		Yes			
	Number of farmers/vet professionals trained in farm waste management	Number	200	40	40	40	40	40
	Regular monitoring reports on antimicrobial pesticides used in plant production monitored and reported on regular basis.	Number	5	1	1	1	1	1
	Number of professionals/farmers in all sectors trained on AMR, AMU & AMC guidelines.	Number	180			60	60	60
	Number of animal health and agriculture health professionals trained & adhere to revised standard treatment guidelines.	Number	120		40	40	40	
Zoonotic diseases	Number of integrated surveillance systems established for zoonotic disease	Number	1		1			
	Reduction in zoonotic disease transmission							
	% of stakeholders engaged in zoonotic diseases Technical Working Groups (TWGs)	%	100	100	100	100	100	100

Table 10 NAPHS Key Performance Indicators (KPI)

JEE Indicator	Key Performance Indicators	Unit	5 years	Year				
				24/25	25/26	26/27	27/28	28/29
	Number of multisectoral outbreak investigations conducted	Number	10	2	2	2	2	2
	Number of operational research studies conducted on priority zoonotic diseases	Number	20	4	4	4	4	4
	Number of multisectoral risk assessment and PRP Sim Ex conducted	Number	2		2		2	
	Number of intersectoral zoonotic diseases surveillance data analysis and reporting systems in place	Number	3	1	2			
	Number of reviewed and enforced multisectoral policies, laws, MOUs, SOPs, and strategic plans	Number	2		2			
	Timely response to priority zoonotic disease management	%	100	100	100	100	100	100
	Number of established multisectoral RRTs for priority zoonotic diseases	Number	15		15			
	Number of RCCE activities conducted on priority zoonotic diseases	Number	12	2	3	3	2	2
	Number of reviewed, monitored, and updated outbreak investigation, PRP, Contingency plans, and guidelines	Number	5	1	1	1	1	1
	Number of ISAVET and FETP trained professionals at the local level	Number	200	40	40	40	40	40
	Number of good production practices implemented	Number	3		1	2		
	Number of animal control officers in target areas with enhanced capacity.	Number	350	70	70	70	70	70
	% of improved adherence to zoonotic disease prevention and control measures in farm and production settings	%	100	100	100	100	100	100
Food safety	Number of guidelines developed.	Number	2	2				
	Number of FBD assessments accomplished.	Number	10	2	2	2	2	2
	Frequency of message transmitted annually through media	Number	5	1	1	1	1	1
	Number of experts trained on viable monitoring system	Number	300	60	60	60	60	60
	Number of surveillance plans developed	Number	5	1	1	1	1	1

Table 10 NAPHS Key Performance Indicators (KPI)

JEE indicator	Key Performance Indicators	Unit	5 years	Year				
				24/25	25/26	26/27	27/28	28/29
	Number of laboratory experts trained in food safety	Number	14	14				
	Number of food establishment operators trained	Number	300	60	60	60	60	60
	Number of regulatory bodies and tourism officers trained,	Number	150	30	30	30	30	30
	Number of experts trained on RRT for food safety	Number	200	40	40	40	40	40
	Number of experts trained on early detection and response in food safety	Number	125	25	25	25	25	25
	Number of experts trained on FSMS	Number	200	40	40	40	40	40
	Number of food processors that implement HACCP	Number	5	5	5			
	Number of experts trained on post-harvest handling and management	Number	100	20	20	20	20	20
	Number of manuals developed	Number	2	1	1			
	Number of contingency plans developed	Number	5	1	1	1	1	1
	Number of experts trained on prevention, detection, and response to illegal food practices	Number	150	30	30	30	30	30
	Number of street food providers trained on prevention, detection, and response to illegal food practices,	Number	250	50	50	50	50	50
	Proportion of foodborne diseases and food contamination detected within 48hr	%	100	100	100	100	100	100
	proportion of food safety emergencies with a multisectoral response plan developed and implemented within 7 days	%	100	100	100	100	100	100
Biosafety and biosecurity	Established regulatory and legal frameworks on biosafety and biosecurity	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes
	% of implementation regulatory and legal frameworks for biosafety and biosecurity requirements at laboratory facilities managing high consequence agent and toxins	%	100	100	100	100	100	100

Table 10 NAPHS Key Performance Indicators (KPI)

JEE Indicator	Key Performance Indicators	Unit	5 years	Year				
				24/25	25/26	26/27	27/28	28/29
	Number of laboratories Implemented biosafety and biosecurity certification program	Number	30					
	% of laboratories that have implemented monitoring and inventory of high consequence pathogens in all facilities managing high consequence pathogens	%	100	100	100	100	100	100
	Number of laboratories that have implemented the bio risks management system across the laboratory system	Number	500		500			
	Developed a standardized biosafety and biosecurity training program across sectors.	Yes/no	Yes	Yes	Yes	Yes	Yes	Yes
	Number of trainings provided to improve knowledge and skills of biomedical engineers on biosafety cabinets certification and negative pressure system verification	Number	20	4	4	4	4	4
	% of academic curricula, continuing education and training programmed for biosafety and biosecurity that align with international best practices.	%	100		100	100	100	100
	% of laboratories that have implemented framework for monitoring, evaluation, updating and implementation of biosafety and biosecurity system at all levels	%	100		100	100	100	100
Immunization	EPI data completeness	%	100	100	100	100	100	100
	EPI data timeliness	%	100	100	100	100	100	100
	Number of AEFI cases investigated and responded	Number	14,925	2,985	2,985	2,985	2,985	2,985
	Developed and implemented strategic plan for optimized vaccination coverage	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes
	% of private health facilities provide immunization	%	100	100	100	100	100	100
	Number of newly introduced vaccines	Number	4	4	4	4	4	4
	% of health facilities with vaccine supplies stock outs	%	100	100	100	100	100	100
	% of health facilities with functional cold chain equipment (refrigerator, cold box, vaccine carrier)	%	100	100	100	100	100	100

Table 10 NAPHS Key Performance Indicators (KPI)

JEE indicator	Key Performance Indicators	Unit	5 years	Year				
				24/25	25/26	26/27	27/28	28/29
	Vaccine production started locally	Yes/No	YES			YES	YES	
	% of secured budget for vaccines, CCEs and vaccine manufacturing	%	100	100	100	100	100	100
	Number of immunization campaigns conducted with more than 95% coverage	Number	136	42	0	42	0	42
	% of AEFI cases investigated	%	100	100	100	100	100	100
	% of Penta 1 and Penta3 vaccine coverage	%	100	100	100	100	100	100
	Number of vaccine supplies received/manufactured and distributed	Dose	133,974,754					
	% of VPD outbreak responded	%	100	100	100	100	100	100
Detect								
Laboratory	Number of established sample referral network and communication systems across all sectors	Number	1	1	1	1	1	1
	Implemented and strengthened mechanism for transporting animal specimens for priority zoonotic diseases and wildlife diseases	%	100	100	100	100	100	100
	% of established electronic sample referral tracking and result communication system at all tier levels	%	100	70	75	85	95	100
	% of healthcare laboratories implementation of QMS.	%	100	100	100	100	100	100
	% of allocated adequate budget for improvement of laboratory infrastructure for quality management systems.	%	85	60	70	75	80	85
	% of human and animal health laboratories established proficiency testing infrastructure and implementation system	%	100	70	75	85	95	100
	% of healthcare laboratories participated in national and regional EQA capacity.	%	100	100	100	100	100	100
	Number of laboratories furnished and equipped with infrastructure for detection of priority pathogens across sectors	Number	13		2	3	4	4
	% availability of supplies for testing all priority pathogens across sectors	%	100	100	100	100	100	100
	Number of laboratory diagnostic services for testing priority pathogens across sectors	Number	13		2	3	4	4

Table 10 NAPHS Key Performance Indicators (KPI)

JEE Indicator	Key Performance Indicators	Unit	5 years	Year				
				24/25	25/26	26/27	27/28	28/29
	Number of laboratories implementing laboratory information system and data management across sectors	Number	650	75	85	160	150	180
	Number of protocols developed for sharing of laboratory testing information across sectors.	Number	2	1		1		
	Identified and mapping of the existing laboratory capacity.	Number	1		1			
	Fully implemented tier-specific diagnostic testing strategy across sectors	%	100		50	75	85	100
	% of implemented diagnostic network optimization (DNO)	%	100		50	75	85	100
Surveillance	National surveillance system evaluation conducted, and findings used for improvement of early warning and surveillance system by 2025	%	100					
	Public health emergency data management system digitized and improved technical capacities for timely outbreak detection and response by 2025.	Number	57000					57000
	Community event-based surveillance system capacitated through training of human and animal health workers by 2028.	Number	19 200					19200
	Gap analysis and operational research conducted, and result used to improve four-way linkage among One Health sectors.	Number	1		1			
	Human and animal health surveillance capacity Improved through training and provision of essential equipment's for real time outbreak detection, reporting and response.	%	100	100	100	100	100	100
	Train health workers on IDSR/PHEM initiative by 2028.	Number	2820	750	750	750	750	750
	Digitized rumor notification and tracking for early warning system.	%	100		100	100	100	100
	Develop tracking mechanism for joint event verification and investigation through application of GIS tool.	%	100		100	100	100	100
	Improved data and information exchange among One Health partners for increased risk awareness.	%	100		100	100	100	100

Table 10 NAPHS Key Performance Indicators (KPI)

JEE indicator	Key Performance Indicators	Unit	5 years	Year				
				24/25	25/26	26/27	27/28	28/29
	Improved decision-making by availing evidence for decision-makers.	%	100		100	100	100	100
	Timely and systematic analyzed and shared data and information for enhanced decision making and action	%	100		100	100	100	100
Human Resource	Established national multi-sectoral workforce registries	Number	1		1			
	Multisectoral workforce strategy adopted/reviewed	Number	1		1			
	Established communication channels in public health emergency management leaders with higher government officials and key partners	%	100	100	100	100	100	100
	Accessible CPD programs in-placed for specialized health personnel working at hard-to-reach areas	%	100	100	100	100	100	100
	One Health capacity-building training program established	%	100	100	100	100	100	100
	Set standards for competency-based training programmed to insure strict adherence	%	100	100	100	100	100	100
	Expanded FETP tracks, regular in-service programs and continuing professional development programs	%	100	100	100	100	100	100
	Identified and mapped resources to ensure a trained workforce for all IHR relevant emergencies	%	100	100	100	100	100	100
	Conducted regional and national experience sharing conferences	%	100	100	100	100	100	100
	Developed and implemented multisectoral surge workforce strategic plan	%	100	100	100	100	100	100
	Prepared multi-sectoral SURGE team training packages and undertake the training	%	100	100	100	100	100	100
	Developed and implemented planning tools to review and evaluate the performance of surge workforce	%	100	100	100	100	100	100
	Competent workforce in placed to effectively implement IHR requirements	%	100	100	100	100	100	100

Table 10 NAPHS Key Performance Indicators (KPI)

JEE indicator	Key Performance Indicators	Unit	5 years	Year				
				24/25	25/26	26/27	27/28	28/29
	Respond							
Public Health Emergency Management	Availability of functioning multisectoral coordination mechanisms (e.g., committees, working groups, platforms) at national and regional levels	%	100	100	100	100	100	100
	Number of trained staff who attained the desired levels of competency on risk profiling, rapid Risk Assessments (RRAs), readiness assessment, and prioritization of risks for health emergency management.	Number	6000	1200	1200	1200	1200	1200
	Proportion of hazard-specific operational contingency plans tested for high-priority and imminent risks	%	100		100	100	100	100
	Availability of resource mobilization strategy for emergency management	Number	1	1	1	1	1	1
	Availability of standardized legal framework for PHEOC operation	Number	1	1	1	1	1	1
	Number of PHEOCs with customized PHEOC handbooks	Number	37	7	7	7	8	8
	Number of PHEOCs with relevant monitoring and evaluation framework	Number	37	7	7	7	8	8
	Number of sub-regional PHEOC structures established and operationalized.	Number	24		24			
	Availability of PHEOC mentorship and coaching programs established and operationalized	%	100	100	100	100	100	100
	Availability of resource mobilization strategy for establishing and operating PHEOCs	%	100	100	100	100	100	100
	Proportion of staff trained on PHEOC/IMS	%	100	100	100	100	100	100
	% of simulation exercises/IAR/AAR/EAR conducted	%	100	100	100	100	100	100
	% of staff demonstrating increased awareness of the emergency response coordination mechanism.	%	100	100	100	100	100	100
	Number of staff participated in training and fellowship programs.	%	100	100	100	100	100	100
	Number of emergency staff completed a pre-deployment training	Number	1440	228	228	228	228	228

Table 10 NAPHS Key Performance Indicators (KPI)

JEE indicator	Key Performance Indicators	Unit	5 years	Year				
				24/25	25/26	26/27	27/28	28/29
	Availability of SOP for recruitment, training, rostering, and deployment of emergency workforce	%	100	100	100	100	100	100
	Availability of standard plans and procedures for surge team mobilization and deployment.	%	100	100	100	100	100	100
	Availability of a trackable and updated database on trained surge teams at national level	%	100	100	100	100	100	100
	Proportion of RRT/EMTs received basic and mandatory trainings using standardized materials on emergency health management	%	100	100	100	100	100	100
	Availability of directive for benefit packages for experts deployed for emergency response	%	100	100	100	100	100	100
	Availability of an approved legal framework and protocol for emergency procurement, importation, and use	%	100	100	100	100	100	100
	Availability of an institutionalized M&E tool to track MCM	%	100	100	100	100	100	100
	Availability of a digitized minimum emergency drugs and supplies list and tracking system	%	100	100	100	100	100	100
	Availability of R&DI division at EPHI	%	100	100	100	100	100	100
	Availability of platform for fast tracking of research findings	%	100	100	100	100	100	100
	Availability of RD&I SOP and guide to facilitate evidence generation and use for decision making.	%	100	100	100	100	100	100
	Proportion of relevant staffs trained on RD&I	%	100	100	100	100	100	100
Linking public health and security authorities	Develop a standard joint preparedness and response training program for public health and security authorities	Number	1		1	1	1	1
	Create a joint platform for collaboration & information sharing between public health & security authorities.	Number	1		1	1	1	1

Table 10 NAPHS Key Performance Indicators (KPI)

JEE Indicator	Key Performance Indicators	Unit	5 years	Year				
				24/25	25/26	26/27	27/28	28/29
	Capacity building and experience sharing	Number	1		1	1	1	1
	Conduct the implementation of the joint plan	Number	1		1	1	1	1
	Assess the diagnostic capacity of laboratories of relevant sectors	Number	1		1	1	1	1
IPC	% of dedicated IPC structures and budgets in place	%	100	70	75	85	95	100
	IPC guides, SOPs and job aides developed and distributed	%	100	100	100	100	100	100
	Number of HCWs trained on IPC	Number	500	100	100	100	100	100
	HCFs monitored and supported using WHO minimum requirements tool	Number	125	25	25	25	25	25
	% of health facilities regularly reporting - IPC key performance indicators	%	100	100	100	100	100	100
	National HCAIs strategic plan developed	Yes/No	Yes	Yes	Yes	Yes	Yes	Yes
	% of secondary and tertiary hospitals conduct HCAIs surveillance	%	25	25	25	25	25	25
	Number of HCWs trained on HCAIs surveillance	Number	200	40	40	40	40	40
	Number of laboratory professionals trained on HCAIs surveillance	Number	80	16	16	16	16	16
	Number of hospital report HCAIs surveillance data	Number	40	8	8	8	8	8
	Number of HCFs assessed for WASH infrastructures	Number	112	22	22	23	23	23
	Number of HCFs assessed for bed occupancy, staffing and workload	Number	112	22	22	23	23	23
	HCFs obtained IPC and WASH supplies	Number	200	40	40	40	40	40
	% of health care facilities meet WHO minimum requirements for IPC programmed, guidelines, training, and monitoring/feedback	%	75	75	75	75	75	75
RCCE	A functional RCCE system in place at all levels, with available resources.	%	100	100	100	100	100	100

Table 10 NAPHS Key Performance Indicators (KPI)

JEE Indicator	Key Performance Indicators	Unit	5 years	Year				
				24/25	25/26	26/27	27/28	28/29
	High quality RCCE messages and materials disseminated at all levels, with available assessment findings.	%	100	100	100	100	100	100
	High quality RCCE messages and materials disseminated at all levels, with available assessment findings.	%	100	100	100	100	100	100
	Others							
POE	Stakeholders physically present at designated PoE are capacitated on cross border communicable disease prevention and control.	%	100	100	100	100	100	100
	IHR core capacity requirements at the designated PoE assessed and gaps filled based on the assessment	%	100	100	100	100	100	100
	Technical taskforce/technical working group involving all relevant stakeholders are established with organized regular meeting and information sharing.	%	100	100	100	100	100	100
	The existing POE CDC guideline and SOPs are updated and revised towards multi hazard approach with all designated PoE staffs trained	%	100	100	100	100	100	100
	All designated PoE are integrated into the national surveillance systems with the involvement of relevant sectors with guidance and SOPs for responding to public health events.	%	100	100	100	100	100	100
	Surveillance system for tracking/detecting the burden of diseases because of travel and international passengers established.	%	100	100	100	100	100	100
	All designated PoE are integrated into the national surveillance systems for biological and/or all hazards with availed guidance and SOPs by involvement of relevant sectors for responding to public health events.	%	100	100	100	100	100	100
	Agreements with neighboring countries as well as with in Ethiopia between different sectors formalized through TOR/MoUs for rapid and secured sharing of data and information on health risks and emergency events at and around PoE, at ground crossings in high-risk areas and where	%	100	100	100	100	100	100

Table 10 NAPHS Key Performance Indicators (KPI)

JEE Indicator	Key Performance Indicators	Unit	5 years	Year				
				24/25	25/26	26/27	27/28	28/29
	communities adjacent to borders are deeply integrated.							
	Human quarantine, Isolation centers and functional referral linkage for case and specimen for cross border communicable disease control and prevention are established.	%	100	100	100	100	100	100
	The laboratory capacity for the points of entry enhanced	%	100	100	100	100	100	100
	Surveillance system for vector borne diseases detection, prevention and control established at designated PoE.	%	100	100	100	100	100	100
	PoEs. Simex/AAR/IAR conducted on passenger's entry/exit screening using risk-based scenarios with multisectoral stakeholders.	%	100	100	100	100	100	100
	Good collaboration with regional and global networks/agencies maintained for early warning and travel health.	%	100	100	100	100	100	100
	Regular updates to timely initiation of relevant international travel related measures commensurate with risk level maintained with multisectoral involvement by an all-hazard approach	%	100	100	100	100	100	100
Radiation emergencies	Established and signed MoU and adopted standard tool used for radiation risk assessment, reporting, notification, and event confirmation endorsed by the relevant first response government agencies/organizations	Number	1		1	1	1	1
	High level advocacy conducted for awareness creation at national level	Number	1		1	1	1	
	Trained health and non-health actors on surveillance, case management and radiological and nuclear emergency response	Number	300	60	60	60	60	60
	% of emergency response drills, Sim Ex/AAR/IAR (as relevant) conducted on radiation emergencies and the response plan updated	%	100	100	100	100	100	100
	% established/designated health facilities with the capacity to manage patients of radiation emergencies.	%	100	100	100	100	100	100

Table 10 NAPHS Key Performance Indicators (KPI)

JEE indicator	Key Performance Indicators	Unit	5 years	Year				
				24/25	25/26	26/27	27/28	28/29
	Procured and accessed national stockpile of medical supplies required for nuclear and radiation emergency countermeasures and SOPs developed for use, storage, deployment, and replenishment.	%	100	100	100	100	100	100
	Improved laboratory capacity to perform the detection and analysis of radiological emergencies	%	100	100	100	100	100	100
	Improved waste storage and processing facility	%	100	100	100	100	100	100
	Established response plan and risk assessment mechanism to Respond to radiological threats	%	100	100	100	100	100	100
Chemical events	%of HFs including poisoning centers reporting 24/7 chemical poisoning surveillance data with electronic reporting mechanisms	%	100	100	100	100	100	100
	Number of trained PHEM officers and relevant sectors on chemical incident surveillance, response, and chemical management	Number	995	199	199	199	199	199
	%of conducted monitoring and evaluation, and Sim Ex to assess the chemicals' surveillance and response status	Percent	100		100	100	100	100
	%of established and strengthened diagnostic laboratories, poison centers and poison information services at national and sub national level	Percent	100		100	100	100	100
	Number of developed chemical event response plan and chemical waste management plan at national, and sub-national with the involvement of relevant stakeholders	Number	1		1	1	1	1
	Established/ revitalized national coordination taskforce and technical working groups involving relevant stakeholders on chemical events	Number	1		1	1	1	1

Table 10 NAPHS Key Performance Indicators (KPI)

CHAPTER 8: REFERENCE

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CHAPTER 9. ANNEX

9.1 Annex 1-Findings of JEE based on the nineteen (19) technical areas and 56 indicators.

Technical areas	Indicator number Indicator	Scores
Prevent		
P1. Legal instruments	P.1.1 Legal instruments	3
	P.1.2 Gender equity and equality in health emergencies	3
P2. Financing	P.2.1 Financing for IHR implementation	2
	P.2.2 Financing for public health emergency response	2
P3. IHR coordination, National IHR Focal Point functions and advocacy	P.3.1 National IHR Focal Point functions	3
	P.3.2 Multisectoral coordination mechanisms	3
	P.3.3 Strategic planning for IHR, preparedness or health security	4
P4. Antimicrobial resistance (AMR)	P.4.1 Multisectoral coordination on AMR	4
	P.4.2 Surveillance of AMR	3
	P.4.3 Prevention of MDRO	1
	P.4.4 Optimal use of antimicrobial medicines in human health	4
	P.4.5 Optimal use of antimicrobial medicines in animal health and agriculture	3
P5. Zoonotic disease	P.5.1 Surveillance of zoonotic diseases	3
	P.5.2 Response to zoonotic diseases	3
	P.5.3 Sanitary animal production practices	2
P6. Food safety	P.6.1 Surveillance of foodborne diseases and contamination	3
	P.6.2 Response and management of food safety emergencies	4
P7. Biosafety and biosecurity	P.7.1 Whole-of-government biosafety and biosecurity system is in place for human, animal, and agriculture facilities	3
	P.7.2 Biosafety and biosecurity training and practices in all relevant sectors (including human, animal, and agriculture)	3
P8. Immunization	P.8.1 Vaccine coverage (measles) as part of national program	3
	P.8.2 National vaccine access and delivery	4
	P.8.3 Mass vaccination for epidemics of VPDs	4
Detect		
D1. National laboratory systems laboratory	D.1.1 Specimen referral and transport system	3
	D.1.2 Laboratory quality system	4
	D.1.3 Laboratory testing capacity modalities	3
	D.1.4 Effective national diagnostic network	4
D2. Surveillance	D.2.1 Early warning surveillance function	4
	D.2.2 Event verification and investigation	3
	D.2.3 Analysis and information sharing	4
D3. Human resources	D.3.1 Multisectoral workforce strategy	4
	D.3.2 Human resources for implementation of IHR	3
	D.3.3 Workforce training	4
	D.3.4 Workforce surge during a public health event	3

Respond		
R1. Health emergency management	R.1.1 Emergency risk assessment and readiness	3
	R.1.2 Public health emergency operations center (PHEOC)	3
	R.1.3 Management of health emergency response	4
	R.1.4 Activation and coordination of health personnel in a public health emergency	2
	R.1.5 Emergency logistic and supply chain management	2
	R.1.6 Research, development, and innovation	3
R2. Linking public health and security authorities	R.2.1 Public health and security authorities (e.g., law enforcement, border control, customs) are linked during a suspect or confirmed biological, chemical, or radiological event	4
R3. Health services provision	R.3.1 Case management	4
	R.3.2 Utilization of health services	2
	R.3.3 Continuity of essential health services (EHS)	4
R4. Infection prevention and control (IPC)	R.4.1 IPC programs	3
	R.4.2 HCAI surveillance	2
	R.4.3 Safe environment in health facilities	2
R5. Risk communication and community engagement (RCCE)	R.5.1 RCCE systems for emergencies	3
	R.5.2 Risk communication	3
	R.5.3 Community engagement	3
IHR Related Hazards and Points of Entry and Border Health		
PoE: Points of entry and border health	PoE.1 Core capacity requirements always for PoEs (airports, ports and ground crossings)	3
	PoE.2 Public health response at PoEs	2
	PoE.3 Risk-based approach to international travel-related measures	4
CE. Chemical events	CE.1 Mechanisms established and functioning for detecting and responding to chemical events or emergencies	2
	CE.2 Enabling environment in place for management of chemical event	2
RE. Radiation emergencies	RE.1 Mechanisms established and functioning for detecting and responding to radiological and nuclear emergencies	3
	RE.2 Enabling environment in place for management of radiological and nuclear emergencies	2

9.2 Annex 2- Matrix for stakeholders Role and responsibilities

Stakeholders Role	PMO	Ministry of Health	NDRMC Commission	EPHI-IHR-OH Secretariat	EFDA	Ministry of Agriculture, EAA, AHI	Members of the Ethiopian Parliament	Ministry of Finance	(EPA, EWCA)	UN agencies, NGO
High level coordination of ministries	✓	✓					✓			
Declaration of public health disaster	✓	✓								
Declaration of PHEs (outbreaks)	✓									
Managing national disasters		✓	✓			✓			✓	✓
Legislation (enactment of laws)	✓						✓			
Enforcing laws and health requirements	✓						✓			
Overall NAPHS implementation management		✓		✓						
Inter-sectoral coordination		✓	✓	✓						
Collaboration in NAPHS implementation		✓	✓	✓	✓	✓		✓	✓	✓
Attending coordination and review meetings		✓	✓	✓	✓	✓	✓	✓	✓	✓
Overall NAPHS monitoring and evaluation		✓		✓		✓			✓	✓
Implementation of activities		✓	✓	✓	✓	✓		✓	✓	✓
M&E and reporting of progress of report		✓	✓	✓	✓	✓		✓	✓	✓
Membership to One health		✓	✓	✓	✓	✓		✓	✓	✓
Resource mobilization		✓	✓	✓	✓	✓		✓	✓	✓
Resource allocation		✓	✓	✓	✓	✓		✓	✓	✓
Financial resource allocation		✓	✓	✓	✓	✓		✓	✓	✓
Accountability and audit management		✓	✓	✓	✓	✓		✓	✓	✓
Facilitating community engagement		✓		✓		✓			✓	
Public health risk and PHE communication		✓	✓	✓						
Facilitating bi and multilateral collaboration		✓	✓	✓						
Technical support for the development of policies	✓	✓	✓	✓		✓	✓	✓	✓	✓
Logistics support during emergencies		✓	✓	✓		✓			✓	✓

9.3 Annex 3-NAPSH Activity Plan

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of implementation				
				2024	2025	2026	2027	2028
P1. Legal Instrument								
1.1: Legal instruments are in place across relevant sectors to support and enable IHR implementation and compliance	To document and review legal instruments to identify gaps across relevant sectors and sub-national level and develop new or revised legal instruments as necessary to support and facilitate IHR implementation and compliance in a more efficient, effective, or beneficial manner	Conduct a legal analysis at the regional level and across relevant sectors to complement legal analysis conducted at the national level and identify, understand, assess, and analyze gaps within subnational legal instruments for IHR implementation.	EPHI and AHI	X	X			
		Develop comprehensive legal instruments based on the assessment conducted at a national level to support and facilitate IHR implementation and compliance in a more efficient, effective, or beneficial manner.	Ethiopian Public Health institute	X	X			
		Conduct advocacy and sensitization meetings to relevant stakeholders for implementation of PHE legislation and IHR implementation at all levels.	Ethiopian Public Health Institute		X	X		X
		Establish and operationalize the National Multisectoral Public Health Security Council and technical working group to complement the coordinating body established at EPHI and oversee public health security.	Ethiopian Public Health institute	X	X	X		
		Routinely organize and conduct simulation exercises, after action reviews, intra-action reviews (SimEx/AAR/IAR) (as relevant) to monitor and evaluate the implementation and effectiveness of legal instruments relating to IHR implementation.	Ethiopian Public Health institute		X	X		X
1.2: Gender equity and equality principles are applied	Strengthened Gender Equity and inequality in Public Health Emergency activities	Conduct systematic gender analysis of health information systems data and legislation on health seeking behavior, service access, service provision and other data related to health emergency response.	Ethiopian Public Health institute	X	X	X	X	

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of implementation				
				2024	2025	2026	2027	2028
throughout IHR capacities		Conduct systematic gender analysis of health information systems data and legislation on health seeking behavior, service access, service provision and other data related to health emergency response.	Ethiopian Public Health institute		X	X		
		Promote discussions, public engagements and seminars on gender equity and equality in health emergencies as an essential thematic area and disseminate findings of analyses to ensure continuous engagement and positioning of the relevance of gender equity and equality for IHR.	Ethiopian Public Health institute	X	X	X	X	X
		Identify and implement evidence-based, sector-specific interventions for the integration of gender-responsive approaches for health security.	Ethiopian Public Health institute	X	X	X	X	
1.2: Gender equity and equality principles are applied throughout IHR capacities	Strengthened Gender Equity and inequality in Public Health Emergency activities	Update, cost, and implement a gender action plan to address the gender gaps related to IHR core capacities.	Ethiopian Public Health institute		X	X	X	
		Develop guidelines, strategies, and tools for mainstreaming gender issues in the IHR core capacities.	Ethiopian Public Health institute	X	X			
P2. Financing								
P2.1. Financing resources for IHR implementation	To ensure financing is available for the implementation of IHR capacities	2.1 Conduct resource mapping and use results for developing and advocating for a financing strategy for the implementation of IHR capacities	Ministry of Health and MOH	X	X	X	X	X
		2.1 Implement an agile and replicable resource mapping system across all relevant ministries; updated biannually with the NAPHS operational plan, to include regional entities and highlight funding gaps.	Ethiopian Public Health institute	X	X	X	X	X

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of Implementation				
				2024	2025	2026	2027	2028
P2.2. Financial resources for public health emergency response	To put in place financing mechanisms to ensure that funds are available and flexible for timely response to health emergencies	2.1 Create a financial tracking system for multi-sectoral IHR-related expenditures; integrated into existing financial management systems, and accessible to key decision-makers.	Ethiopian Public Health institute	X	X	X	X	X
		2.2 Foster and reinforce partnerships among local, national, and international mechanisms for joint financing of timely response to health emergencies	Ministry of Health	X	X	X	X	X
		2.2 Review and make recommendations to ensure the functionality of emergency public financing mechanisms (PFM), particularly the mobilization of funds when needed at the national and subnational levels for relevant sectors.	Ethiopian Public Health institute and MOH		X	X	X	X
		2.2 Set up a Specialized Emergency Fund for rapid fund disbursement to all sectors at both national and subnational levels.	Ministry of Health and EPHI		X	X		
		2.2 Develop SOPs or MoUs to fast-track emergency procurement and service agreements; aligned with existing financial guidelines or approved by the finance ministry.	Ethiopian Public Health institute		X	X		
		2.2 Conduct reviews of emergency financing effectiveness, focusing on speed, transparency, and accountability, leading to actionable adjustments.	Ministry of Health			X		
		2.2 Identify and convene key stakeholders to conduct a legal and regulatory review to understand the various legal mechanisms to access sources of domestic funding in the case of a health emergency.	Ministry of Health		X			
P3. IHR coordination, National IHR Focal Point functions and advocacy								
P.3.1 National IHR Focal Point functions	To strengthen the functionality IHR NFP	Capacitate the IHR NFP office through HR recruitment	Ethiopian Public Health institute	X	X	X	X	X
		Capacitate the IHR NFP office infrastructure	EPHI	X				

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of Implementation				
				2024	2025	2026	2027	2028
P.3.2 Multisectoral coordination mechanisms	Improve multisectoral IHR coordination mechanism at all levels	Improve the capacity of IHR-NFP through IHR-monitoring and evaluation framework	EPHI	X	X	X	X	X
		Develop a strategy on the IHR NFP functionality to ensure multisectoral engagement	EPHI	X	X		X	
		Strengthen/establish the multisectoral IHR coordination mechanisms at national and subnational level	EPHI	X	X	X	X	X
		Foster cross border collaboration and coordination	EPHI	X	X	X	X	X
		Advocate for health emergency preparedness and IHR implementation at all levels	EPHI	X	X	X	X	X
P.3.3 Strategic planning for IHR, preparedness or health security	Develop NAPHS, RAPHS and monitoring, evaluation and learning framework	Developed multisectoral plan and tracking	EPHI	X	X	X	X	X
P4. Antimicrobial resistance (AMR)								
P.4.1 Multisectoral Coordination	P.4.1 To develop and implement a national action plan on AMR	4.1.1 Enhance multisectoral coordination for AMR between (human, agriculture, animal & environment)	Ministry of Health and MOA	X	X	X	X	X
		4.1.2 Enhance Internal health sector coordination (AMR, such as universal health coverage (UHC), primary health care (PHC) and health emergencies) as per One health strategic plan	Ministry of Agriculture and MOH		X	X	X	X
		4.1.3. Mapping, mobilizing resource and engagement of all key actors for identified priority actions.	Ministry of Health	X	X	X	X	X
		4.1.4. An external and internal communication policy, strategy and tools should be put in place.	Ministry of Health	X				
		4.1.5. Strengthening the multisectoral monitoring and evaluation framework across all sectors.	Ministry of Health and MOH	X	X	X	X	X

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of implementation				
				2024	2025	2026	2027	2028
P.4.2.AMR surveillance system is put in place	P.4.2 To develop and implement a multisectoral national action plan on AMR	4.1.6. Capacity building activities for farmers and health professionals (human, animal, plant, environment) on AMU/AMR and good practices management	Ministry of Health and EAA		X	X	X	X
		4.2.1. Expand AMR site scaleup & testing, priority pathogens (sample & volume) and surveillance with microbiology, molecular and genomics surveillance	EPHI	X	X	X	X	X
		4.2.2. Integrate data management, data repository that include other clinical sites and/or other components of the country's health system. HMIS & private sector.	EPHI		X	X	X	X
		4.2.3. Build capacity of microbiology laboratory through training, laboratory infrastructure (equipment and supplies) procurement	Animal Health institute and EPHI	X	X	X	X	X
		4.2.4. Strengthen the performance of the AST, Antimicrobial residues in food, animal, human, plant sector	Animal Health institute and EPA	X	X	X	X	X
3. Effective mechanisms are in place to prevent multidrug resistant organisms (MDRO)	To strengthen mechanisms for preventing MDRO	4.2.5. Conduct a mapping of surveillance research/academic (public and private in all sectors) including food safety laboratories that can be potentially integrated in the AMR surveillance system.	EPHI, MOH and AHI	X	X	X	X	X
		4.3.1. Map key stakeholders for MDRO prevention & containment in a One Health approach.	EPHI	X	X		X	
		4.3.2. Capacity building on MDRO prevention and containment for health care providers	EPHI		1		X	
		4.3.3. Implement a strategy and action plan to prevent and contain MDRO at all levels (embedded in the overall IPC strategy) and develop, endorse, and disseminate a standard protocol for containing MDRO outbreaks.	Ethiopian Public Health institute	X	X			

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of implementation				
				2024	2025	2026	2027	2028
4. Optimize use of antimicrobial medicines in human health	To ensure appropriate use of all antimicrobials in humans	4.3.4. Improve health facility capacities to characterize AMR pathogens, identify emerging and re-emerging MRDO, causing human infections, systematically report to the national level and identify reference laboratories to provide confirmatory testing for exceptional phenotypes and genotypes.	Ethiopian Public Health institute and EFDA		X	X	X	X
		4.4.1. Enforcement of legislation.	EFDA, MOH		X			X
		4.4.2. Implement integrated AMS programs (AMR+IPC+MRDO) and practices in designated health facilities, including training, monitoring, communication, and identification of required budget.	Ministry of Health		X	X		X
		4.4.3. Establish systems to ensure AMS elements are included in pre-service and in-service training curricula for health professionals.	Ministry of Health		X	X	X	X
5. Optimize use of antimicrobial medicines in animal health and agriculture	To ensure responsible and prudent use of all antimicrobials in animal food production, animal health and agriculture systems	4.4.4. Scale up functioning of AMR program in all major and selected human health facilities.	MOH, EAA, NVI, EPA		X	X	X	X
		4.5.1. Map and review existing legislation, regulations, and policies particularly for food producing animals.	EAA, NVI, EPA		X	X	X	X
		4.5.2. Strengthen farm waste management associated with AMU/AMR in priority animal sectors (poultry and dairy farm waste management manuals).	Environmental Protection Authority		X	X	X	X
		4.5.3. National monitoring system for antimicrobial-pesticide use in plant production including bactericides and fungicides and other	Ministry of Agriculture		X	X	X	X

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of Implementation				
				2024	2025	2026	2027	2028
5.1. A multisectoral surveillance system is in place for priority Zoonotic diseases/pathogens	To strengthen multisectoral surveillance systems for priority zoonotic diseases/pathogens	4.5.4. Enhance the Capacity of professionals/farmers/all sectors in animal health and agriculture to promote responsible and prudent use at their capacity building in AMR indicators.	Ethiopian Agricultural Authority		X	X	X	X
		4.5.5. Enforcement of legislation. And regulations on import, control on sub-standard drugs, production, selection, prescribing and sale of standardized antimicrobials.	Ministry of Agriculture. EAA		X	X	X	
		P5. Zoonotic diseases						
		5.1.1. Strengthen integrated surveillance and systematic data/reporting system (interoperable) for priority zoonotic disease under One health approach.	EPHI, MOA	X	X	X	X	X
		5.1.2. Strengthen zoonotic diseases Technical Working at national and subnational levels	MOA, EPHI	X	X	X	X	X
		5.1.3. Strengthen multisectoral outbreak management systems for priority endemic and emerging zoonotic diseases	Ministry of Agriculture, EPHI	X	X	X	X	X
5.2: A functional mechanism to respond to priority zoonotic	To enhance mechanisms for responding to priority zoonotic diseases at national and subnational levels	5.1.4. Operational research on priority endemic and emerging zoonotic diseases outbreak events	EPH, MOA	X	X	X	X	X
		5.1.5. Improve multisectoral risk assessment and PRP SimEx capacity on priority emerging zoonotic diseases	Ministry of Agriculture, EPHI	X	X	X	X	X
		5.1.6. Strengthen intersectoral zoonotic diseases surveillance data analysis and reporting	MOA, EPHI	X	X			
		5.2.1. Review and enforce multisectoral Policies, Laws, MOUs, SOPs, and Strategic Plans	EPH	X	X			
		5.2.2. Establish multisectoral (human, Animal and Environmental health) Rapid Response Teams (RRTs) for emerging and endemic priority zoonotic diseases.	MOA	X	X	X	X	X

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of implementation				
				2024	2025	2026	2027	2028
diseases is in place		5.2.3. Set up a dedicated emergency funding provisions for management (investigation and response) of high impact zoonotic emerging infectious disease	Ministry of Agriculture, EPHI	X	X	X	X	X
		5.2.4. RCCE on Priority zoonotic diseases: Engage local communities and conduct social mobilization/community awareness	EPHI, MOA	X	X	X	X	X
		5.2.5. Review, monitor and update outbreak investigation, PRP, Contingency plans and strategies/guideline on regular basis	EPHI	X	X	X	X	X
		5.2.6. Engage trained personnel from human and animal health in the field of epidemiology and demonstrate shared experience in responding to zoonotic disease epidemics.	EPHI, MOA	X	X	X	X	X
		5.3.1. Strengthen compliance and implementation of recommended good sanitary standards and animal welfare practices in animal production practices	Ministry of Agriculture	X	X	X	X	X
		5.3.2. Build capacity of animal control officer workforce capacity in target areas by provision of the necessary equipment for animal capture, euthanasia, and appropriate sample collection	Ministry of Agriculture	X	X	X	X	X
P6. Food safety								
Surveillance systems are in place for the detection and monitoring of foodborne diseases and	To strengthen surveillance systems for foodborne diseases and food contamination	P6.1.1 Strengthen joint risk assessments of acute foodborne events (chemical and microbiological), publish periodic reports (e.g., an epidemiological bulletin) and identify appropriate risk management strategies through multisectoral involvement.	EPHI, MOH	X	X	X	X	X
		P6.1.2 Strengthen continuous, systematic, and integrated surveillance data quality monitoring system and processes	EPHI	X	X	X	X	X

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of Implementation				
				2024	2025	2026	2027	2028
food contamination		P6.1.3 Strengthen Surveillance, Early Warning and Information System Management for diseases and Health Events	EPHI	X	X	X	X	X
		P6.1.4 Strengthen Research on Nutrition, Food System, and Food Safety	EPHI	X				
		P6.1.5 Strengthen public awareness systems and mechanisms to Improve knowledge, awareness amongst professionals and stakeholders along the food value chain.	Ethiopian Food and Drug Authority, EPHI	X	X	X	X	X
A functional mechanism is in place for the response and management of food safety emergencies	To strengthen mechanisms for response and management of food safety emergencies.	P6.2.1 Strengthen platforms for documenting and dissemination of lessons and best practices for timeliness, information exchange, public health risk messaging, efficiency and effectiveness of response, collaboration, and communication for food safety events.	EPHI	X	X	X	X	X
		P6.2.2 Strengthen Prompt Public Health Emergency Response and Recovery	MOA	X	X	X	X	X
		P6.2.3 Implementing an integrated food safety and quality system	EFDA, EPHI	X	X	X	X	X
		P6.2.4 Improve post-harvest management throughout the food value chain	MOA, EAA	X	X	X	X	X
		P6.2.5 Strengthen effective resource mapping and mobilization system for health emergency preparedness	National NDRMC, EPHI	X	X	X	X	X
		P6.2.6 Strengthen prevention, detection, and response to food adulteration, illegal food, and street food products	EFDA	X	X	X	X	X
P7. Biosafety and biosecurity								
P7.1 Whole-of-government	To strengthen biosafety and	P7.1.1 Establish regulatory and legal frameworks on biosafety and biosecurity	EPHI, EPA		X	X		

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of implementation				
				2024	2025	2026	2027	2028
biosafety and biosecurity system is in place for human, animal, and agriculture facilities	biosafety system implementation in human, animal, and agriculture facilities	P7.1.2. Implement regulatory and legal frameworks of biosafety and biosecurity requirements at laboratory facilities managing high consequence agent and toxins	EPHI			X		
		P7.1.3. implement laboratory biosafety and biosecurity certification program	EPHI	X	X	X	X	X
		P7.1.4. implement monitoring and inventory of high consequence pathogens in all facilities managing high consequence pathogens (Research, private sectors, and lower-level facilities).	EPHI		X	X		
		P7.1.5. Implement bio risks management system across the laboratory system	EPHI, EWCA	X	X	X	X	X
		P7.2.1. Develop a standardized a Biosafety and Biosecurity training program across sectors.	EPHI			X		
7.2 Biosafety and biosecurity training and practices in all relevant sectors (including human, animal, and agriculture)	Improve human resource capacity on biosafety and biosecurity at all sectors	P7.2.2 Build human resources capacity on biosafety and biosecurity across sectors at all levels	EPHI, AHI	X	X	X	X	X
		P7.2.3 Provide training to improve knowledge and skills of biomedical engineers on biosafety cabinets certification and negative pressure system verification	EPHI	X	X	X	X	X
		P7.2.4. Implement sustainable academic curricula, continuing education and training programs for biosafety and biosecurity that align with international best practices.	EPHI	X	X	X	X	X
		P7.2.5. Implement framework for monitoring, evaluation, updating and implementation of biosafety and biosecurity system at all levels	EPHI	X	X	X	X	X
P8. Immunization								

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of Implementation				
				2024	2025	2026	2027	2028
8.1: Optimum vaccine coverage (measles) as part of a national program	To increase vaccine coverage for priority vaccine-preventable diseases (VPDs) in the country	Design solutions to improve immunization data quality, completeness, and utilization, thereby enhancing evidence-based decision-making and actions, as well as obtaining a reliable estimate of vaccination coverage.	Ministry of Health	X	X	X	X	X
		Strengthen and optimize AEFI surveillance systems, including coordination, implementation, and response, for efficient identification, notification, reporting, investigation, data analysis, causality assessment, and feedback processes.	Ethiopian Food and Drug Authority	X	X	X	X	X
		Develop a strategic and Operational planning and implement the plans to achieve optimum vaccination coverage and to address immunization inequity by improving micro-planning and designing tailored strategies, focusing on conflict affected areas, remote rural, urban slum, and climate change affected areas to vaccinate most vulnerable populations.	Ministry of Health	X	X	X	X	X
		Communication, Community engagements and strong public-private partnership for immunization	Ministry of Health	X	X	X	X	X
8.2 Provision of national vaccine access and delivery	To strengthen capacity for vaccine access and delivery to target populations	Introduction of new vaccines (Meningitis, Measles SIA, malaria, yellow fever)	MOH, EFDA	X	X	X	X	X
		Forecast, procure, receive, store, and deploy vaccines and vaccine supplies (Enhance vaccine management and availability at service delivery points by expanding last-mile vaccine delivery to improve access and coverage. This includes addressing gaps in stock monitoring to prevent stockouts, particularly at the health facility level)	Ministry of Health		X	X	X	X
		Support advocacy for local vaccine research, development, manufacturing, and implementation to ensure a sustainable and equitable vaccine supply (functional human and animal vaccine manufacturing infrastructures.	Ministry of Health		X		X	

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of Implementation				
				2024	2025	2026	2027	2028
8.3 An effective mechanism for mass vaccination for epidemics of VPDs	To strengthen capacity for mass vaccination in response to VPD epidemics	Strengthening of well-designed and functional vaccine registration, licensing, post marketing surveillance and service inspection system	EFDA	X	X	X	X	X
		Improve and optimize cold chain equipment's capacity (conduct a detail assessment of existing cold chain equipment, functioning, and identify bottlenecks to maintaining need cold chain infrastructure; and use assessment data to operationalize a plan to service and procure Colchian infrastructure as needed). This includes ensuring sufficient availability of cold vans and vehicles for vaccine distribution	Ministry of Health		X		X	X
		Improve and optimize cold chain equipment's capacity (conduct a detail assessment of existing cold chain equipment, functioning, and identify bottlenecks to maintaining need cold chain infrastructure; and use assessment data to operationalize a plan to service and procure Colchian infrastructure as needed). This includes ensuring sufficient availability of cold vans and vehicles for vaccine distribution	Ministry of Health	X	X	X	X	X
		Collaborate with relevant partners to secure resources and investments for vaccines, CCEs and Vaccine Manufacturing	Ministry of Health		X			
		Collaborate with relevant partners to secure resources and investments for vaccines, CCEs and Vaccine Manufacturing	Ministry of Health	X				
		Improves effectiveness of immunization campaigns (Develop Miro plans and tailored strategies and relevant criteria for mass vaccination campaigns to ensure equity and equality in access to vaccination (including hospitals, community vaccination centers, mobile vaccination sites, home visits to disabled and elderly, etc.).	Ministry of Health	X	X	X	X	X

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of implementation				
				2024	2025	2026	2027	2028
D1.1. Specimen referral and transport system = 5	To improve specimen referral and transportation system	Implement emergency budget/provisions for reallocation of funds to emergency mass vaccination campaigns, as a national priority	National Veterinary Institute		X	X	X	X
		Enhance integration between disease surveillance and other information systems (e.g., AEFI) to provide data for decision-making in VPD outbreak response.	Ministry of Health		X	X	X	X
		Implement monitoring and reporting of coverage and safety of vaccines used in mass vaccination campaigns at all levels.	Ministry of Agriculture	X	X	X	X	X
		Share best practices and lessons learned in mass vaccination campaigns, with a focus on ensuring access/availability of vaccines; at national and international forums to engage the country in peer-to-peer learning.	Ministry of Health	X	X	X	X	X
D1. National laboratory systems								
D1.1. Specimen referral and transport system = 5	To improve specimen referral and transportation system	D.1.1.1 Establish sample referral network and communication systems within and among human, environmental and animal health diagnostic laboratories.	EPHI	X	X	X	X	X
		D.1.1.2. implement to Strengthen a mechanism for transporting animal specimens for priority zoonotic diseases and wildlife diseases.	EWCA, EPHI, AHI	X	X	X	X	X
		D.1.1.3. Establish electronic sample referral tracking and result communication system at all tier levels	EPHI	X	X	X	X	X
		D.1.1.4. Strengthen specimen referral and transport system including hard-to-reach areas.	EPHI	X	X	X	X	X
		D.1.1.5. Strengthen a system for data collection, analysis and M&E for specimen referral and transport system, including turnaround time and specimen integrity for human and animal.	EPHI	X	X	X	X	X

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of Implementation				
				2024	2025	2026	2027	2028
D1.2. Laboratory quality system	To strengthen the implementation of Laboratory Quality Management System at all levels	D1.2.1. Strengthen implementation of QMS, international and national laboratory standards at national, regional, and lower-level laboratories across sectors.	EPHI	X	X	X	X	X
		D1.2.2. Allocate adequate resources to improve infrastructure at all level laboratories to strengthen the implementation of quality management systems.	Ethiopian Public Health Institute	X		X		
		D1.2.3 Implement framework to exercise, monitor and evaluate established Quality Management System at all levels across sectors.	EPHI	X	X	X	X	X
		D1.2.4 Establish proficiency testing infrastructural, production, distribution, result collection and feedback provision capacity for human and animal health laboratories for all priority pathogens.	EPHI			X	X	X
		D1.2.4 Establish proficiency testing infrastructural, production, distribution, result collection and feedback provision capacity for human and animal health laboratories for all priority pathogens.	EPHI, AHI		X	X	X	X
D1.3. Laboratory testing capacity modalities = 6	To strengthen Laboratory testing capacity for the detection of all priority diseases and conditions	D1.2.5. Strengthen the national and regional EQA capacity for implementation of EQA program at all levels.	EPHI, AHI	X	X	X	X	X
		D1.3.1. Furnish and Equip the infrastructure of laboratories for testing all priority pathogens including genomic laboratory facilities across sectors	EPHI, AHI	X	X	X	X	
		D1.3.2. Ensure sustainability of supplies for testing all priority pathogens across sectors	EPHI, AHI, EWCA, EPA	X	X	X	X	X
		D1.3.3. Expand and implement laboratory diagnostic services for testing priority pathogens across sectors	EPHI, EWCA	X	X	X	X	X
		D.1.3.4. Standardize and implement laboratory information system and data management at all levels across sectors	EPHI		X	X	X	X
		D.1.3.5. Establish mechanisms and protocols for timely and appropriate sharing of information generated by	EPHI		X			

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of implementation				
				2024	2025	2026	2027	2028
D1.4. Laboratory testing capacity modalities – 6	To strengthen laboratory information system, data management and sharing	laboratory testing in relevant sectors, especially linking laboratory data with surveillance and risk assessment.						
		D.1.4.1. Map existing laboratory capacity and establish referral networks for priority pathogens.	EPHI		X			
		D.1.4.2. Fully Implement tier-specific diagnostic testing strategy at all levels across sectors	EPHI					X
		D.1.4.3. Implement Diagnostic network optimization (DNO)	EPHI		X			
		D.1.4.4. Develop a framework for monitoring, evaluation, updating and implementation of tier-specific diagnostic network.	EPHI, AHI	X	X	X	X	X
D2. Surveillance								
Early warning surveillance systems are well established and functional	Establish a well functional early warning surveillance system	Evaluate national surveillance systems and capacities, focusing on their effectiveness in achieving early warning objectives and driving timely decision-making against locally prioritized health risks and hazards.	EPHI		3			
		Strengthen the decentralized PHEM data management system with technical capabilities, digital reporting tools, and communication infrastructures for real-time data collection, quality monitoring, assurance, and reporting.	EPHI	X	X	X	X	X
		Improve competency of relevant animal and public health workers (e.g., veterinarians, clinicians, laboratorians, PH surveillance officers, etc.) on event detection, assessment, and characterization of prioritized health risks and hazards.	EPHI, EAA	X	X	X	X	X
		Foster joint operational research for the development and testing of surveillance best practices, tools, technologies, and innovative approaches for system improvements.	EPHI		X			

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of Implementation				
				2024	2025	2026	2027	2028
Well-functioning event verification and investigation system is in place	Establish a well-functioning event verification and investigation system	Enhance the capacity of national and regional veterinary laboratories and community-level clinics to detect and report/disseminate surveillance data in real-time	MOA, AHI, EPHI	X	X	X	X	X
		Strengthening public health event/outbreak detection, characterization, data management and evidence generation and reporting/communication at primary-level health system	EPHI	X	X	X	X	X
		Standardize available tools, procedures, and decision-making processes for facilitating prompt health event or emergency verification, characterization, and grading for effective management of health emergencies during early phase	EPHI		X	X	X	X
		Enhance early warning systems by complementing with evidence gathered from various sources to provide up-to-date, interdisciplinary insights about priority impending hazards, vulnerabilities, and threats.	EPHI		X	X	X	X
		Reinforce joint investigation and response capacities to facilitate an evidence-based decision-making process supported by objectively measurable criteria and relevant expert opinions.	EPHI		X			
		Strengthen the routine monitoring and evaluation of EWAR functions, systems, and capacity effectiveness across administrative levels (as applicable) using SimEX, AAR, IAR/7-1-7 or EAR (as applicable) to generate evidence for program improvement.	EPHI	X	X	X	X	X
		Improve collaboration and routine data and information exchange among relevant partners (especially One Health partners) to increase risk awareness among relevant stakeholders.	EPHI	X	X	X	X	X

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of implementation				
				2024	2025	2026	2027	2028
Surveillance data and information are systematically analyzed and shared to inform decision making for action	To conduct timely and systematic analysis and sharing of data and information and enhance evidence for decision making and action	Improve the content, pertinence, relevance, and timing of information, data, and evidence reported to decision-makers across relevant stakeholders for better data product consumption.	EPHI		X	X	X	X
		Leverage advanced data analysis and evidence generation using data from multiple sources to improve health risk mapping, resource estimation, and forecasting related impact of health events or emergencies.	Animal Health institute, EPHI, MOA	X	X	X	X	X
		Improve the frequency of surveillance data publication, information, and data sharing among the animal and public sectors	Ethiopian Public Health institute	X	X	X	X	X
D3. Human resources								
D3.1 Multisectoral workforce strategy	To have competent multisectoral workforce that are capable to prevent, detect and response to public health emergencies or threats	3.1.1 Establish national multi-sectoral workforce registries of competent and practicing personnel and collect key performance indicators regularly	Ministry of Health, EPHI	X	X	X	X	X
		3.1.2 Map and establish a collaboration agreement with national and international stakeholders/sectors to facilitate mobilization and deployment of emergency response team	EPHI, MOH	X	X	X	X	X
		3.1.3 Adopt and review the multisectoral workforce strategy regularly	Ministry of Health		X	X		X
		3.1.4 Incorporate appropriate incentive packages and strategies to attract, train and retain competent personnel to meet national and subnational needs within the multisectoral workforce strategy	Ministry of Health		X	X		
		3.1.5 Update resource mapping and sustainable financing strategy for the implementation of Multisectoral Workforce Strategy	Ministry of Health	X	X	X	X	X

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of implementation				
				2024	2025	2026	2027	2028
D3.2 Human resources are available to effectively implement IHR	To develop a health workforce that is competent to prevent, detect, assess, notify, report, and respond to health emergencies of national and international concern at all levels of the health system to effectively implement IHR requirement	3.2.2 Use the data obtained from workforce mapping to identify gaps on workforce for evidence-based planning	EPHI		X	X	X	X
		3.2.2 Create monitoring framework to address public health workforce preparedness needs (quantity, quality) at national and subnational levels	EPHI		X			
		3.2.3 Harmonize communication channels between strategic public health emergency management leaders with higher government officials and key partners	Ethiopian Public Health institute			X		
		3.2.4 Continue and expand CPD trainings and retention programs for specialized health personnel involved in IHR implementation in hard-to-reach areas.	EPHI		X	X	X	X
		3.2.5 Develop a "One Health" capacity-building program that equips professionals at primary/woreda levels with the skills and resources needed in epidemiology, case management, and laboratory services etc.	EPHI	X	X	X	X	X
D3.3 Workforce training	To have trained and skilled emergency workforce equipped with necessary resources that are capable to prevent, detect and response to any public health emergencies or threats	3.3.1 Build mechanisms that ensure strict adherence to nationally or internationally recognized standards for competency-based training programs	EPHI	X	X	X	X	X
		3.3.2 Expand current public health and FETP to include refresher courses alongside with field epidemiologists, regular in-service programs and continuing professional development programs	Ministry of Health, EPHI		X	X	X	X
		3.3.3 Mobilize resources to ensure a trained workforce for all IHR relevant emergencies/hazards	EPHI	X	X	X	X	X
		3.3.4 Lead or participate in peer-to-peer initiatives to strengthen capacities globally	EPHI		X	X	X	X

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of implementation				
				2024	2025	2026	2027	2028
D3.4 Workforce surge during a public health event	To have skilled and equipped multisectoral and multidisciplinary surge team that are ready to deploy immediately and capable to detect and response to public health outbreaks or threats	3.4.1 Implement a multisectoral surge workforce strategic plan for health emergencies at all levels	EPHI	X				
		3.4.2 Implement training packages and conduct training in advance of health emergencies for the multisectoral surge workforce at all levels	EPHI	X	X	X	X	X
		3.4.3 Use data driven planning tools to review and evaluate the performance of surge workforce	EPHI		1			
R1. Health emergency management								
R1.1. Emergency risk and readiness assessment	To develop capacities to conduct regular strategic (or equivalent) risk profiling, readiness assessment and RRAs to determine risks to be prioritized for health emergency management and support decision-makers during emergencies	Create an enabling environment for coordination and collaboration among stakeholders to conduct risk assessment, EPRP development, financing, its implementation, and routine monitoring and evaluation through a whole-of-society approach.	Ethiopian Public Health institute	X	X	X	X	X
		Standardize procedures and guidelines for risk and readiness assessments, emergency preparedness plan preparation, operational contingency planning, and communication among relevant stakeholders.	Ethiopian Public Health institute	X	X	X	X	
		Improve staff competency and system-level capability for effective risk profiling, RRAs, readiness assessment, and determination of priority risks for health emergency management.	Ethiopian Public Health institute	X	X	X	X	X
		Develop, review, update, and test hazard-specific operational contingency plans for high-priority and imminent risks based on readiness assessment (s) and prioritized readiness anticipatory actions.	Ethiopian Public Health institute	X	X	X	X	X
		Develop a strategy for resource mobilization, sustainable emergency financing, and routine financial arrangements for implementing preparedness, system development, and risk mitigation.	Ethiopian Public Health	X	X	X	X	X

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of Implementation				
				2024	2025	2026	2027	2028
R1.2. Public health emergency operations center (PHEOC)	Develop PHEOC capacities to enable countries to respond in a timely manner to all hazard emergencies and disasters		institute, EAA					
		Standardize PHEOC operation by establishing a legal framework and relevant platforms and determining a relevant model for PHEOC implementation in the nation based on the context.	Ethiopian Public Health institute	X	X	X	X	X
		Ensure proper functionality of PHEOCs using PHEOC handbooks, the equipping of contact centers, and proper staffing and training using the one health approach.	EPHI	X	X	X	X	X
		Networking of public health emergency operations centers (PHEOCs) to ensure interoperability and harmonization of actions and interventions during preparedness and emergency management	EPHI	X	X	X	X	X
		Strengthen routine monitoring and evaluation of PHEOC capacities to track their operational status and generate evidence for the decision-making process and program improvement.	EPHI	X	X	X	X	X
		Scale up and decentralize PHEOC further down to a strategically selected sub-regional structure and develop a strategy for service continuity for PHEOC operation.	EPHI, EAA	X	X			
		Establishing PHEOC Mentorship and coaching system to enhance functioning capability of regional PHEOCs	EPHI	X	X	X	X	X

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of Implementation				
				2024	2025	2026	2027	2028
R.1.3. Management of health emergency response	To develop a management and coordination mechanism for timely emergency response to all hazard health emergencies and disasters	Develop a strategy for resource mobilization, sustainable emergency financing, and routine financial arrangements to build, equip, maintain, and operate PHEOCs.	EPHI	X	X	X	X	X
		Improve system-level capability and individual competencies at PHEOCs for effective coordination of health emergency responses.	EPHI	X	X	X	X	X
		Enhance the effectiveness of the health emergency management system (IMS) through generating evidence using simulation exercises, IAR/AARs/7-1-7/EAR, and their application for the decision-making process.	EPHI	X	X	X	X	X
		Improve the awareness and competency of staff on the emergency response coordination mechanism through awareness creation, training, SIMX, and a fellowship program.	EPHI	X	X	X	X	X
		Ensure a safe and secure working environment from misconduct during health emergency response operations, including sexual exploitation and abuse of vulnerable populations, staff harassment, etc.	EPHI		X	X	X	X
R.1.4. Activation and coordination of health personnel in a public health emergency	To develop a functional system for activating, sending, receiving, and coordinating health personnel and teams during a health emergency	Ensure the availability of a mechanism and governance to develop competent human resources with up-to-date information for health emergency management.	EPHI		X	X		
		Improve the effectiveness of surge team mobilization and deployment through regular monitoring and generating evidence using simulation exercises, IAR/AARs/7-1-7/EAR, and their application for decision-making.	Ethiopian Public Health institute		X	X		X
		Ensure ownership of human resources for health management coordination during health emergencies.	Ethiopian Public Health institute	X	X	X	X	X

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of Implementation			
				2024	2025	2026	2027
R1.5. Emergency logistic and supply chain management	To develop a functional system for activating and coordinating emergency logistics and supply chain management during a health emergency	Strengthen surge team capacity by improving the competency of RRTs for health emergency management by standardizing capacity building materials and undertaking	Ethiopian Public Health Institute	X	X	X	X
		Improve human resource management and retention mechanisms to improve experts' motivation during their engagement in health emergency management, which in turn improves health service delivery.	EPHI	X	X	X	
		Establish a governance mechanism with standard procedures and regulatory pathways for the use of medical countermeasures in line with health emergency grading for effective mobilization and delivery of required logistics and supplies during health emergency responses.	EPHI		X	X	
		Institutionalize regular monitoring of quantity and quality control of the strategic stockpile of essential medical countermeasures and conduct regular testing of policies and procedures using SimEx, AAR, IAR, and EAR/7-1-7 (based on their relevance) for evidence generation and continuous system improvement.	EPHI	X	X	X	X
R1.6. Research, development and innovation	To develop and implement a RD&I mechanism to generate evidence-based solutions for emergency preparedness and response through research and	Improve the effectiveness of the supply and logistics management system by generating evidence through routine readiness and functionality assessment and program monitoring and evaluation for decision-making.	EPHI		X		
		Improve multisectoral and multidisciplinary RD&I activities by establishing a mechanism to coordinate the management of RD&I and cooperation agreements with local and international stakeholders.	EPHI		X		
		Develop a mechanism to support the fast tracking and expansion of research capacities during health emergencies to gather the latest evidence and communicate with decision-makers.	Ethiopian Public Health Institute		X		X

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of implementation				
				2024	2025	2026	2027	2028
	development and dissemination of findings	Improve policy, practice, and guidelines using contextual evidence generated through cross-sectoral collaborative research on health emergencies with joint action to utilize evidence for decision-making.	EPHI		X	X	X	X
		Improve the competency of relevant staff across sectors through capacity building and the incorporation of RD&I into undergraduate and postgraduate studies in relevant programs.	EPHI		X	X	X	X
R2. Linking public health and security authorities								
R2.1. Public health and security authorities (e.g., law enforcement, border control, customs) linked during a suspect or confirmed biological, chemical, or radiological event.	To strengthen the coordination and collaboration between public health and security authorities to properly detect and respond during a suspect or confirmed biological, chemical, or radiological event and any other public health emergencies.	Develop a standard joint preparedness and response training program for both public health and security authorities to effectively deal with public health events at all levels.	Ministry of Health		X	X	X	X
		Create a joint platform for collaboration and information sharing between public health and security authorities as well as other relevant stakeholders.	Ministry of Health		X	X	X	X
		Prepare & implement a curriculum for training module on different joint investigation issues.	EPHI		X			
		Build capacity to provide training (international) and experience sharing for national staffs from public health and law enforcement sectors on the investigation, management and conducts drill exercises on joint response to biological threats.	EPHI	X	X	X	X	X
		Conduct assessment of the coordinated joint detection and response plans.	Ministry of Agriculture	X	X	X	X	X
		Assess and improve the diagnostic capacity of existing laboratories in public health and law enforcement sector for forensic examination of biological threats.	Ethiopian Public Health institute		X	X	X	X
R3. Health services provision								

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of implementation				
				2024	2025	2026	2027	2028
14.1: Case management procedures	To enhance case management interventions by evaluating, reviewing, updating, and disseminating different types of case management guidelines, SOP, and protocols on regularly bases (3-5 years).	Review, and evaluate case management guidelines for priority, patient referral protocol, transportation of potentially infectious patients and document	Ministry of Health	X	X	X	X	X
		Create an integrated data system at all levels of health-care facilities in both urban and rural areas by reviewing and inclusion of all data points OPD	Ministry of Health	3	1	0	0	0
		Enhance capacity of practice in detailed investigation of epidemics death audit and documentation at Health Facilities (Public and Private)	Ministry of Health	X	X	X	X	X
		Institutionalize the mental health and psychosocial support for future Public Health emergency Preparedness and response activities	Ministry of Health, EPHI		X	X	X	X
		Disseminate case management guidelines and SOPs for the management and transport of potentially infectious patients at the subnational level.	Ministry of Health		X	X	X	X
14.2: Mechanism for continuity of essential health services (EHS) during a health emergency is well established	To ensure easily accessible, equitable, and affordable, and effective essential health services by reducing barriers for continuity of essential health service during emergencies.	Conduct regular multidisciplinary Sime/AAR/IAR (as relevant) with participation from all levels of health service delivery, and update case management guidelines and SOPs based on recommendations.	Ministry of Health	X	X	X	X	X
		Conduct regular multidisciplinary Sime/AAR/IAR (as relevant) with participation from all levels of health service delivery, and update case management guidelines and SOPs based on recommendations.	Ministry of Health	X	X	X	X	X
		Consider specific requirements for vulnerable groups including children, woman, elderly, forcibly displaced people, etc. are included in case management processes, guidelines, and SOPs for relevant IHR hazards.	Ministry of Health		X	X		

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of implementation				
				2024	2025	2026	2027	2028
14.3 Utilization of health services before, during and after health emergencies at all levels of health service delivery	To enhance health service utilization by improving access, reporting system and collaboration with private health facility owners.	Revise, evaluate and update the National EHS package and its draft guidelines for inclusion of lessons learnt from recent simulation exercises and After-Action Reviews for implementation at National and subnational level	EPHI, MOH	X	X			X
		Develop and test mechanisms for the protection of medical staff, effective staff rotation and optimum IPC methodologies to ensure continuity of EHS through maintaining safe staffing levels.	Ministry of Health	X	X	X	X	X
		Train health workers and decision-makers, on their roles to maintain EHS during emergencies and mechanisms developed to support EHS continuity	Ministry of Health	X	X	X	X	X
		Conduct a risk informed panning in relevant sectors to identify and list critical operations and functions that need to be continued during emergencies to the support delivery of EHS.	Ethiopian Public Health institute, MOH		X			X
		Establish and test a well-functioning, safe, effective, quality, and equitable EHS delivery, including access to primary care, before, during and after emergencies	Ministry of Health		X	X	X	X
		Develop and test mechanism for monitoring EHS continuity before, during and after emergencies, including identification of vulnerable groups who need specially considered during specific types of emergencies	Ethiopian Public Health institute		X			

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of implementation				
				2024	2025	2026	2027	2028
		Develop mechanisms to support the continuity of EHS at the health facility level during an emergency, such as effective triage and adapted access to primary health care services	Ethiopian Public Health institute		X			
		Develop a guideline for critical health service operations/functions that need to be continued during health emergencies in the health ministry and all relevant related departments at the national and subnational levels.	Ministry of Health	X	X			X
		Mobilize private and non-government institutions that can be mobilized during emergencies and agree on roles and responsibilities before, during and after emergencies to ensure continuity of EHS alongside emergency service provision.	Ministry of Health		X	X	X	X
		Develop continuity of planning of essential functions that support the continuity of EHS by relevant sectors including private and nongovernment institutions	Ministry of Health		X			X
R4. Infection prevention and control (IPC)								
15.1: IPC programs	To have active IPC programs implemented at national and healthcare facility levels	15.1.1: Advocate to have dedicated structure and budget for IPC at national, regional and HCF level	Ministry of Health	X	X	X	X	X
		15.1.2: Develop, review, and update national IPC guidelines, SOPs job aids, and other required technical documents.	Ministry of Health	0	X	X	X	
		15.1.3: Build the capacity of IPC focal persons and HCWs by providing basic and targeted IPC and WASH trainings at all levels	Ministry of Health	X	X	X	X	X

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of implementation				
				2024	2025	2026	2027	2028
15.2: HCAI surveillance	To develop and maintain a functioning and effective system for HCAI surveillance at national and health facility levels	15.1.4: Monitor and support HCFs to enable them to achieve the WHO minimum requirements for IPC.	Ministry of Health	X	X	X	X	X
		15.1.5: Strengthen national M&E system for IPC program	Ministry of Health	X	X	X	X	X
		15.2.1: Develop national strategic plan for HCAIs surveillance, including endemic HCAIs, antimicrobial resistant pathogens and pathogens prone to infectious disease outbreaks	Ministry of Health		X	X	X	X
		15.2.2: Increase the number of secondary and tertiary hospitals conducting HAIs surveillance to 25% and provide timely and regular feedback to senior management and health workers	Ministry of Health		X	X		X
		15.2.3: Build the capacity of health professionals responsible for HAIs surveillance activities on basic epidemiology, surveillance, and IPC	Ministry of Health		2	2	2	2
		15.2.4: Strengthen capacity of the selected hospitals and provide them resources that enable them to identify and report HCAI through a national surveillance system	Ministry of Health	X	X	X	X	
		15.2.5: Coordinate the surveillance process with regional surveillance networks and provide timely feedback reports to relevant stakeholders on the national situation of HCAI	Ministry of Health		X	X	X	X
		15.2.5: Coordinate the surveillance process with regional surveillance networks and provide timely feedback reports to relevant stakeholders on the national situation of HCAI	Ministry of Health	X	X	X	X	X

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of Implementation				
				2024	2025	2026	2027	2028
15.3: Safe environment in health facilities	To ensure a safe environment in all healthcare facilities for health workers, patients, caregivers, visitors, and any other service provider/user	15.3.1: Assess the current national status of healthcare facilities in relation to WASH infrastructure and services and availability of required supplies, materials and equipment for IPC and document gaps.	Ministry of Health	X	X			
		15.3.2: Improve implementation of the minimum requirements of staffing, workload, and bed occupancy standards to improve IPC in healthcare facilities.	Ministry of Health		X			
		15.3.3: Update national building standards, standards for safe water, sanitation, hygiene, waste, and clean energy services for healthcare facilities to enable compliance with IPC measures.	Ministry of Health		X			
		15.3.4: Support implementation of IPC improvement actions at all healthcare facilities, based on the assessment findings (using the IPCAF and complementary WASH FIT tools or national equivalents.)	Ministry of Health	X	X	X	X	X
R5. Risk communication and community engagement (RCCE)								
5.1. Risk communication and community engagement (RCCE) systems	To improve the RCCE systems with mechanisms for functions and resources will be in place and integrated within broader emergency programs by the end of 2028	5.1.1. Strengthen the RCCE system capacity at all levels through development of the strategy, guidelines, and SOPs, and trainings	Ethiopian Public Health institute	X	X	X	X	X
		5.1.2. Strengthen coordination platform with stakeholders, partners, and donors to enhance RCCE activities	EPHI	X	X	X	X	X

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of Implementation				
				2024	2025	2026	2027	2028
5.2. Risk communication	To improve risk communication with delivered high quality, timely and impactful risk communication message, and materials for the target community by the end of 2028	5.1.3. Digitalize RCCE system to ensure systematic exchange of information with the existing one health system to enhance media scanning, infodemics management, community engagement and feedback, dissemination of health messages, documentation, and achieving.	EPHI	X	X	X	X	X
		5.1.4. Strengthen monitoring and evaluation systems to assess the RCCE implementation capacity at all levels.	EPHI	X	X	X	X	X
		5.1.5. Allocate dedicated resources for an effective RCCE system at the national and subnational levels.	EPHI	X	X	X	X	X
		5.2.1. Apply evidence based and theory driven RC intervention during emergency preparedness and response phase.	EPHI	X	X	X	X	X
		5.2.3. Reach targeted communities with tailored and Inclusive RCCE message and materials	EPHI		X	X	X	X
5.3. Community engagement	To improve community engagement with codesign, capacitating and involving community networks.	5.2.4. Improve mechanisms for media engagement across all sectors	EPHI		X	X	X	X
		5.2.5. Engage and Advocate decision makers and influencers on major RCCE interventions	EPHI		X	X	X	X
		5.3.1. Engage community representative and social networks to improve community ownership during PHE	EPHI		X	X	X	
		5.3.2. Empower the community /household to plan and implement Public Health Emergency management through an innovative approach (high-priority districts with multiple PHEs/outbreaks)	EPHI	X	X	X	X	

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of implementation				
				2024	2025	2026	2027	2028
		5.3.3. Capacity building mechanisms for multisectoral community health workforce and community engagement in the management of health emergencies and resilience building are well established	EPHI	X	X	X	X	X
		5.3.4. Strengthen mechanisms for systematic community engagement interventions during public health emergencies	EPHI	X	X	X	X	X
PoE: Points of entry and border health								
PoE1. Core capacity requirements at all times for PoEs (airports, ports, and ground crossings)	PoE 1.1. To confirm fully functionality of IHR-2005 Core capacity requirements by an all-hazard approach and integrated into national surveillance system at all PoEs.	Capacitate stakeholders with physical presence at designated points of entry on cross border communicable disease prevention and control	EPHI	X	X	X	X	X
		Assess IHR core capacity requirements at the designated PoEs and fill the gaps based on the assessment	EPHI		X			
		Establish technical taskforce/technical working group involving all relevant stakeholders and organize regular meeting and information sharing.	EPHI	X	X	X	X	X
		Update and revise existing PoEs CDC guideline and SOPs towards Multi Hazard approach and train staff at all designated PoEs	EPHI		X	X		
		Integrate all designated PoEs into the national surveillance systems at least for biological hazards and at most for all hazards with the involvement of relevant sectors with guidance and SOPs for responding to public health events.	EPHI	X	X	X	X	X
PoE 2. Effective public health	PoE 2.1. To provide well updated and revised PoEs and all	Establish surveillance system for tracking the burden of diseases because of travel and international passengers	EPHI	X	X	X	X	X

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of implementation				
				2024	2025	2026	2027	2028
response measure towards any events including biological hazard at all designated PoEs.	hazard working document through regular assessments with standardized public health response measures and functional multi sectoral platforms	Integrate all designated PoEs into the national surveillance systems at least for biological hazards and at most for all hazards with the involvement of relevant sectors with guidance and SOPs for responding to public health events.	EPHI	X	X	X	X	X
		Formalize agreements with neighboring countries as well as with in country between different sectors through TOR/MoUs for rapid and secured sharing of data and information on health risks and emergency events at and around PoEs, in particular at ground crossings in high-risk areas and where communities adjacent to borders are deeply integrated.	EPHI	X	X	X	X	X
		Establish human quarantine, Isolation centers and functional referral linkage for case and specimen for cross border communicable disease control and prevention	EPHI		X	X		X
PoE 3. Risk based towards international travel related measures	PoE 3.1. To provide effective public health response measures including detection, prevention, response and reporting towards any events including biological hazard at all designated PoEs.	Enhance the laboratory capacity for the points of entry	EPHI	X	X	X	X	X
		Establish a surveillance system for vector borne at designated PoEs	EPHI	X	X	X	X	X
		Ensure that the PoERs multi sectoral health emergency contingency plans are well integrated into other emergency response plans at the PoE, subnational and national levels.	EPHI	X	X	X	X	X

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of implementation				
				2024	2025	2026	2027	2028
		Conduct and document SimEx/AAR/IAR (as relevant) at least annually at premises of designated PoEx for entry/exit screening, communication, testing, transport for referral hospitals, etc. using risk-based scenarios with multisectoral stakeholders.	EPHI	X	X	X	X	X
		Maintain good collaboration with regional and global networks/agencies through provision information to the international travelers through continuous publication of travel health advice and notice (HAN).	EPHI	X	X	X	X	X
		Provide regular updates to timely initiate relevant international travel related measures commensurate with risk level with multisectoral involvement by an all-hazard approach	EPHI	X	X	X	X	X
		CE. Chemical events						
CE1. Mechanisms are in place for surveillance, alert and response to chemical events or emergencies, supported by an enabling environment	To strengthen preparedness and surveillance activities for potential chemical hazards to early detect, report and timely respond for chemical incidents	CE1.1. Establish a surveillance system and 24/7 reporting mechanism for community reports (poison center free hotline) and health system report (using electronic reporting tool)	EPHI	2	2	2	2	2
		CE1.2. Capacity building on chemical incident surveillance and response, and chemical management for PHEM officers and relevant sectors.	EPHI, MOH	X	X	X	X	X
		CE 1.3. Conduct risk assessment for chemical agents in the nation and develop preparedness and response plan based on the findings	EPHI	X	X	X	X	X
		CE 1.4 Conduct periodic monitoring and evaluation, and SimEx to assess the surveillance and response status	EPHI	X	X	X	X	X

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of implementation				
				2024	2025	2026	2027	2028
		CE 1.5 Establish and strengthen diagnostic laboratories, poison centers and poison information services at national and sub national level	EPHI, MOH	X	X	X	X	
CE2. Enabling environment is in place for management of chemical events	To establish national multisectoral coordination and collaboration mechanisms, national policies, legislation and incident management plan for management of chemical events.	CE 2.1 Develop chemical event response plan and chemical waste management plan at national, sub-national with the involvement of relevant stakeholders	EPHI	X	X	X	X	X
		CE 2.2. Develop/Revitalize national coordination taskforce and technical working groups involving relevant stakeholders and organize regular meetings	EPHI	X	X	X	X	X
		CE 2.3. Conduct high level advocacy workshop, risk communication and regular information dissemination through electronic bulletin	EPHI	X	X	X	X	X
RE. Radiation emergencies								
RE19.1. Mechanisms are in place for detecting and responding to radiological and nuclear emergencies,	To strengthen policies, legislation, and multisectoral coordination, through implementation of information sharing mechanisms t, advocacy, and capacity building activities to detect and respond to radio nuclear emergencies	19.1.1. Development of the, MOU for the information sharing with relevant stakeholders regularly on the risk and threats that are potential for radiation emergencies.	Other	X	X	X		
		19.1.2. Conduct a high-level advocacy for awareness creation at national level	Other			X	X	
		19.1.3. Train health and non-health actors on surveillance, case management and emergency response for radiation and nuclear emergencies	Ministry of Health and EPHI	X	X	X	X	X
		19.1.4. Develop a mechanism for risk analysis and alert for a graded approach to preparedness and response for Radiological and Nuclear emergencies	Other			X	X	X

Indicator	Objectives	Summary of Key Activities (Strategic actions)	Responsible authority	Year of implementation				
				2024	2025	2026	2027	2028
RE19.2. Enabling environment in place for management of radiological and nuclear emergencies		19.1.5. Develop and conduct emergency response drills, SimEx/AAR/IAR (as relevant) on radiation emergencies and update the response plan, mechanisms, and guidelines accordingly.	Other	X	X	X	X	X
	To strengthen the enabling environment for the management of radiological emergencies through laboratory detection and respond capacity with regular monitoring activities	19.2.1. Establish/designate at least one health facilities with capacity to manage patients of radiation emergencies.	Ministry of Health	X	X	X	X	
		19.2.2. Procure and establish access to a national stockpile of medical supplies required for nuclear and radiation emergency countermeasures (as recommended by the WHO policy advice on stockpiles, 2023), and develop SOPs for use, storage, deployment, and replenishment.	Ministry of Health	X	X			
		19.2.3. Improve laboratory capacity to perform the detection and analysis of radiological emergencies	EPHI	X	X			
		19.2.4. Improve the waste storage and processing facility (including the laboratory for conditioning of radioactive sources)	Other	X	X	X	X	X
		19.2.5. Respond to radiological threats with joint risk assessment, investigation, and implementation of the response plan.	Ministry of Health	X	X	X	X	X

9.4 Annex 4- National standard cost estimation for NAPHS

General Information		
Country	Ethiopia	
First year of NAPHS	2024	
Number of years for NAPHS (1 to 5)	5	
Currency exchange rate	56.5998	USD as of 3/26/2024
Currency of cost estimations	BIR	
National standard costs (default values for the cost estimation data entry forms)		
Default values for meeting/workshop/training form		Comments and/or clarifications
Resident per diem	0	
Nonresident per diem	850	Maximum per diem based on regional participants going to Addis
Number of additional days for non-resident participants (0,1,2)	3	average travel day
Venue rental / day	5000	
Lunch	1200	
Tea/coffee break	1000	This includes two-time water and two times tea /coffee
Stationary	70	
Trainer per diem	0	the same as the above two peridium rate
Trainer/facilitator fees (rate per day)	2500	2500
Consultant		Comments and/or clarifications
<i>International</i>		
Per diem	14150	250\$
Daily fee rate	28,300	500\$
International flight cost	141500	2500\$
<i>National</i>		
Per diem	650	
Daily fee rate	16980	300\$
Travel cost	7100	Air travel 70% of time and 30% land (=70%*9500+30%*1500)
Human resources		
Job title	Salary (annual or monthly)	Comments and/or clarifications
Senior Special Advisor	126,296	
Special Advisor	101037	
Senior sector specific TA	37,610	
Sector Specific TA	31968	
Project manager	64,905	
Senior Project coordinator	51940	
Finance Coordinator	35280	
M&E expert	35280	
Human resources expert	33242	
Epidemiologist, Biostatistician, MPH	51940	
Other unit costs to standardize		
Type	unit cost	comment
media airtime Tv	25,000	prime time for one minute

International travel per-diem	100\$	
International travel transport	2500\$	
International travel lodging	250\$	
Wi-Fi, airtime	14500 birrs	per year
document printing	5	per page
roll up banner printing	3000	1 rollup
banner printing	1500	per msq
video production	100,000	for one minute video
airtime Radio	12,000	prime time for one minute
transport for workshop	200	within 50-100km
hardship allowance	40%	40% of the total regular per-diem will be added
Field visits		
Supervisor per diem	650	
Driver per diem	650	
Vehicle cost (per day)		
Car rental per day	7000	130\$ per day
Service vehicle	5000	Per field visit
4 x 4	0	
Other 2	0	
Other 3	0	
Other 4	0	
Other 5	0	
Fuel per day	4000	250 km per day and 1/5km for fuel and 1 litter unit price 80

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