



MINISTRY OF HEALTH
PUBLIC HEALTH EMERGENCY OPERATIONS CENTRE

Documentation of Public Health Emergency Lessons Learned in Mozambique

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TECHNICAL DATA

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LIST OF ACRONYMS AND ABBREVIATIONS

CDC	Centres for Disease Control and Prevention
CENOE	National Operational Centre for Emergency
CICOV	COVID-19 Internment Centre
CMAM	Centre of Medicines and Medical Supplies
EOC	Emergency Operating Centres
CTGD	Disaster Management Technical Council
CCGD	Disaster Management Coordinating Council
CLGRC	Local Committees for Disaster Risk Management
HCT	National Humanitarian Team
HCTWG	National Humanitarian Team Working Group
INAM	National Institute of Meteorology
DAF	Directorate of Administration and Finance
DCI	Department of Communication and Image
DDM	District Drug Depository
DeProS	Health Promotion Department
DIEH	Hospital Infrastructure and Equipment Department
DNAM	National Directorate of Medical Services
DNF	National Pharmacy Directorate
DNMTA	National Directorate of Traditional and Alternative Medicine
DNPS	National Directorate of Health Professionals
DNSP	National Directorate of Public Health
DPM	Provincial Warehouse of Medicines
DPS	Provincial Health Directorate
DRH	National Directorate of Human Resources
IHR	International Health Regulation
IMS	Incident Management System
INGD	National Institute for Disaster Risk Reduction and Management
LIS	Laboratory Information System
MACS	Medicines and Medical Products Management Information System
MISAU	Ministry of Health
NIH	National Institute of Health
NGO	Non-Governmental Organization
IPC	Infection Prevention and Control
PHEOC	Public Health Emergencies Operational Centre
SOP	Standard Operating Procedures
SPS	Provincial Health Service
UNAPROC	Mozambique's National Civil Protection Unit
WHO	World Health Organization

EXECUTIVE SUMMARY

This documentation exercise is to ensure systematization of good practices and lessons learned from the process of establishing Public Health Emergency Centres in Mozambique. The rationale is to gain an understanding on how the documentation of these practices and lessons learned can serve as a basis for improving interventions and creating a sustainable archive for public health emergency activities in Mozambique.

Mostly qualitative in nature, this exercise is supported by a thorough analysis of official and other documents on public health emergency activities, including activity reports and minutes of key meetings with other actors. In addition, interviews were conducted with the main actors involved in this process, namely senior Ministry of Health (MISAU) officials, funding partners and some non-governmental organizations working in the field of health emergencies.

The exercise drew on the experience of coordinating and managing information in the context of emergencies, in general, and of responding to the COVID-19 pandemic, in particular. Indeed, the preparedness and response to the COVID-19 pandemic appears to have demonstrated that some actions can be maximized to yield significant gains in establishing sustainable mechanisms for the management of public health emergencies.

Mozambique is a country with a high level of vulnerability and exposure to disasters, some natural, and some being humanitarian disasters caused by cyclical wars that result in public health emergencies. The country is therefore a signatory to different regional and international instruments such as the southern african development community (sadc) protocol on health and the commitment to implement the international health regulations. These instruments are important to improve countries' preparedness and response to public health emergencies. Added to these regulations and protocols is the country's constitution, which defines health as a right for every citizen, including sector policies and strategies.

Consistent with the above, the present study surveys lessons learned in the area of public health emergencies in mozambique and considers the following elements as relevant:

- In general, the survey underscored that the emergency framework, in its broad sense, has been given consideration by government public authorities, including in the health sector. The country has indeed cyclically experienced disaster emergencies resulting in public health problems. However, the approach to specific public health preparedness and response has not developed significantly as the country is yet to have an integrated and consolidated approach to multi-sectoral collaboration for the purpose of emergency response;
- The accumulated experience in preparedness and response for public health emergencies has been exclusively from the health sector and often without sufficiently strong organization to allow for better coordination. Even though in 2019 the sector has created a public health emergency operational centre (pheoc), it is not yet operational to centrally coordinate preparedness and response to public health emergencies;
- The emergence of the covid-19 pandemic showed, however, that when the sector prepares and uses collaborative approaches with a multiplicity of actors and sectors, significant results can be achieved and disaster situations avoided. However, even in this context, with a poorly functioning pheoc, the approaches mobilised relied heavily on informal arrangements and, above all, on the support of senior management, with emphasis on the direct involvement of the president of the republic and the minister of health. There is not yet a full legal framework for intersectoral coordination and collaboration for public health emergencies aligned with the “one health” approach. In other words, a collaborative,

intersectoral and multidisciplinary approach to achieving the expected health results, recognizing the various determining dimensions;

- The legal framework for a functional incident management system (ims) is dispersed and with limitations to effectively accommodate pheoc. The approval by parliament of the public health law is a window of opportunity for the reorganization of the mechanisms for preparedness and response to public health emergencies, with particular emphasis on pheoc. Complementary and management devices may allow for better operationalization and influence a more integrated approach to public health emergency preparedness and response;
- Anchoring pheoc will be decisive for its capacity to articulate with different sectors and actors, as well as to mobilize resources. Currently, without having a legal framework that gives it a strategic position, accommodated in the national directorate of public health (dnsp), it does not have the skills to perform the functions of a coordination platform, intersectoral and multidisciplinary, central in the preparation and response to health emergencies. Its administrative powers are too subordinate to influence other health domains, not even other related sectors of the incident management system;
- In terms of human resources, even if the misau has a highly competent staff, the pheoc organization needs a specialized leadership approach to coordinate public health emergency preparedness and response. And again, the anchorage assigned to pheoc should be able to attract specialized cadres with a competency development plan (formations and trainings);
- For the operationalization of pheoc, a resource mobilization plan must be made, either by allocating funds from the state budget or by attracting funds from donors as well as from the private sector. At present, some development partners (who, cdc, etc.) Have expressed interest in supporting pheoc to function at full capacity. To this end, it is necessary to design and install not only transparency and accountability mechanisms, but also monitoring and evaluation mechanisms with clear implementation roadmaps.

RECOMMENDATIONS

From the desk reviews and field research, lessons were systematized on public health emergency preparedness and response in Mozambique. The following are recommended:

- Complement the review of the public health legal regime through the regulation of the recently approved public health law to enable the rapid operationalization of PHEOC;
- Influence the review of legislation complementing related sectors of the Incident Management System to include an integrated approach to public health emergencies;
- Clearly define a strategic position that will enable PHEOC to exercise its role in coordinating, preparing for, and responding to public health emergencies from a broad perspective. A position that allows it to influence different sectors using a multidisciplinary approach focused on public health;
- Accelerate the development of the PHEOC strategic plan and implementation roadmap, including the design of Standard Operating Procedures (SOPs), considering that they are the materialization guides for the public health emergency preparedness and response. The PHEOC operationalization tools should enable it to establish Monitoring and Evaluation (M&E) plans. Accelerating the process would take advantage of the momentum and space created by the emergence of the COVID-19 pandemic to institute collaborative;

- Map and design fund mobilization mechanisms for the operationalization of PHEOC and improving accountability and transparency mechanisms as well as M&E. This implies designing a clear plan of activities and results;
- Identify and equip a physical space for the operation of PHEOC to ensure its greater dynamism. However, in a first phase, and given the material, financial and human resource limitations, a more virtual operating perspective would be strategic. Over time, the team's learning would enable it to become fully operational;
- Design professional qualifications, recruiting and training key human resources to perform the functions defined for the PHEOC.

1. INTRODUCTION

VillageReach and Dalberg, with funding from the Bill & Melinda Gates Foundation, provide technical assistance to the Ministry of Health (MISAU) to improve its capacity to manage and sustainably respond to public health emergencies. These organizations work mainly along two lines of support: Strengthening the management capacities of the central level of MISAU on matters relating to public health emergency; and (ii) Developing the strategic perspectives and operational plan of the Public Health Emergencies Operational Centre (PHEOC).

One of the planned activities is the documentation of good practices and lessons learned during technical assistance to the MISAU. The MISAU was also contracted to systematize this experience and based on some related documents that are envisaged: two *learning briefs* and a *policy brief* on public health emergencies. The basic idea of the exercise is to consider that the documentation of these practices and lessons learnt can serve to improve interventions and create a sustainable archive for public health emergency activities in the health sector. The present text represents the first learning document.

In the context of preparedness and response to public health emergencies, the PHEOC was established in 2019. This centre was intended to serve as a support device for national authorities/entities to coordinate preparedness and response to public health emergencies. However, according to the report¹ on the initial functioning of the PHEOC, it operates with limitations and is unable to fulfil its central coordination mandate. Furthermore, the outbreak of the COVID-19 pandemic and the consequent increase in demand for services at the central and local levels exposed the weaknesses in the functioning of the PHEOC, such that it was unable to offer services to meet the demand².

The gap in the overall framework of the public health emergency situation also revealed the need for a functional PHEOC for sustainable management of public health services, particularly with regard to emergency preparedness and response. In any case, COVID-19 provided an opportunity for improved PHEOC organization and strategic planning. The documentation of pandemic management actions may open space for improvement in the design of the public health emergency response approach.

This first paper focused on exploring and systematizing lessons learned in the coordination and information management components. The exercise drew on the experience of emergencies, in general, and the response to the COVID-19 pandemic, in particular. The basic assumption is that the systematization of this information

¹ COESP, Report of the Workshops on Development of COESP's Mission and Vision, MISAU, Maputo 2021.

² Ibid.

can enable public authorities in the health sector to make decisions and design robust actions for the implementation of effective responses in any public health emergency situation.

For this purpose, the WHO's guiding framework for establishing PHEOC³ was applied. The study focused on VillageReach's contribution to support for public health emergencies along the above two lines. The WHO guiding framework is advantageous as it allows for the reading and extraction of evidence of practice and lessons from these actions, providing indicators on how the institutionalization and operation of a PHEOC should proceed, including the assessment of material capacities to respond to public health emergencies.

This documentation provides both evidence of good practices and lessons learned, and also elements that constitute entry points for enhancing and improving the PHEOC intervention. The exercise may allow not only to map the main achievements and potential challenges, but also to facilitate a better organization of actions in response to public health emergencies.

To better structure the presentation of the contents of this learning document, the text is divided into four chapters, followed by a section dedicated to conclusions and another focused on recommendations. The first chapter presents the introductory and methodological elements. The second chapter provides a brief contextualization of the emergency situation in general and health emergencies in Mozambique in particular. The same chapter includes a brief presentation of the emergency situation of the COVID-19 pandemic and the coordination of the response in Mozambique. The third chapter elaborates on the normative and institutional framework for the establishment of PHEOC, focusing on the legal framework and the implications of the position assigned to this platform, within the hierarchies of the Ministry of Health, to effectively coordinate public health emergencies. The fourth chapter focuses on operational issues that include elements of the organization and functioning of PHEOC. At the end of the document, in addition to the conclusion, recommendations are made for the strengthening of preparedness and sustainable response capacities to public health emergencies in Mozambique.

1.1. METHODOLOGY

The documentation of lessons learned and good practices on public health emergency focused on the actions developed for strengthening and preparing the response. The exercise is one of qualitative analysis, supported by a thorough review of project documents, activity reports and minutes of meetings with key actors in the process.

This document analysis activity was complemented by a specific bibliographic research on public health emergency issues, which allowed for a deeper understanding of the subject through comparative analysis with other contexts (particularly in Africa) where PHEOC was institutionalized. In Mozambique, the literature on PHEOC is still embryonic. There are, however, other contexts, such as West Africa (Senegal, Nigeria, Cameroon and others), which have produced relatively solid knowledge, used as a basis for reflection and reading of the particular case of Mozambique.

The outbreak of the COVID-19 pandemic and the emerging challenges triggered a wave of reflection in various sectors regarding public health emergencies. Many countries, particularly in Africa, were caught by surprise in dealing with emergency management issues in the context of COVID-19. In some cases, the response to the

³ WHO, *Public Health Emergency Operations Center (PHEOC) Legal Guide: Guide for Development of Legal Framework to Authorize the Establishment and Operationalization of PHEOC*, Brazzaville, 2021.

spread of the pandemic created strategies that can be sustainably adapted in the restructuring of PHEOC in Mozambique⁴.

In the Mozambican case, the difficulties in effectively operationalizing PHEOC did not allow it to provide functional strategic assistance. However, the activities implemented to address COVID-19, such as the institutionalization of a Technical and Scientific Committee⁵, the creation of the Emergency Committee, Technical Working Groups, information sharing, and the use of Information and Communication Technologies to disseminate information, made it possible to deepen and consolidate the actions underway, with a view to the sustainable management of public health emergencies. Indeed, the context is propitious for putting these concerns on the public agenda and ensuring the inclusion of all interested sectors.

To complement the documentary and bibliographic study, semi-structured interviews were administered to actors considered relevant (list of interviewees in annex), as a way of collecting experiences built during the management of the emergency, based on the indicators of the programme logframe and, above all, on the WHO guidelines for the creation of PHEOC. To this end, the data collection instruments were designed (see annex).

Data analysis was performed using the content analysis method, grounded in the Grounded-Theory⁶ for data of a qualitative nature. The Grounded-Theory is a method of qualitative data analysis which allows understanding the meaning of certain situations and actions. Thus, after data collection, the first step was to categorize the data, followed by its coding. On the basis of this exercise, a report plan was built to present the results, the most significant elements of the study and recommendations that could guide the strategic actions of the PHEOC.

The whole process of collecting, processing data and writing the report was agreed with VillageReach and, by the latter, shared with other relevant actors such as Dalberg and the MISAU.

1.2. STUDY LIMITATIONS

The scarcity of information (due to the restrictions associated with the control of the spread of COVID-19) and the difficulty of conducting face-to-face interviews are some of the main study limitations. With regard to the former, there is not enough data and literature on emergencies in general, and on public health emergencies in Mozambique (e.g. no statistics on cases, resulting fatalities, incidence maps, etc.), although the extreme vulnerability of the country is recognised.

With regard as to the second limitation, some interviewees were reluctant to speak openly about issues raised by the research team, given the political sensitivity of some strategic and organizational issues related to public health emergency preparedness and response. To protect the identity of interviewees, at their request, names were withheld and fictitious names were attributed.

⁴ Jiyang Ma, Yangmu Huang & Zhi-Jie Zheng, 'Leveraging the Public Health Emergency Operation Center (PHEOC) for Pandemic Response: Opportunities and Challenges', *Global Health Journal*, vol. 4, no. 4, 2020.

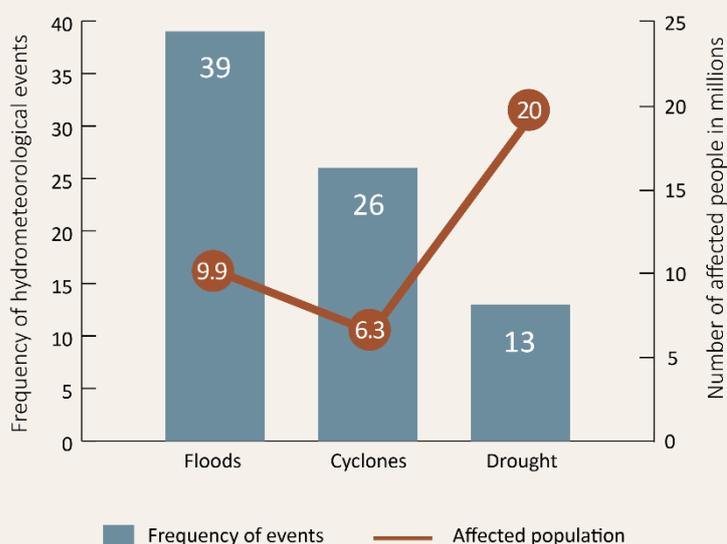
⁵ Resolution n. 20/2020 of March 25, created the Technical-Scientific Commission for Prevention and Response to COVID-19, a consultation and technical advisory body to the Government that operates in the Ministry of Health.

⁶ Anselm L. Strauss and Juliet M. Corbin (eds.), *Grounded Theory in Practice*, Thousand Oaks: Sage Publications, 1997.

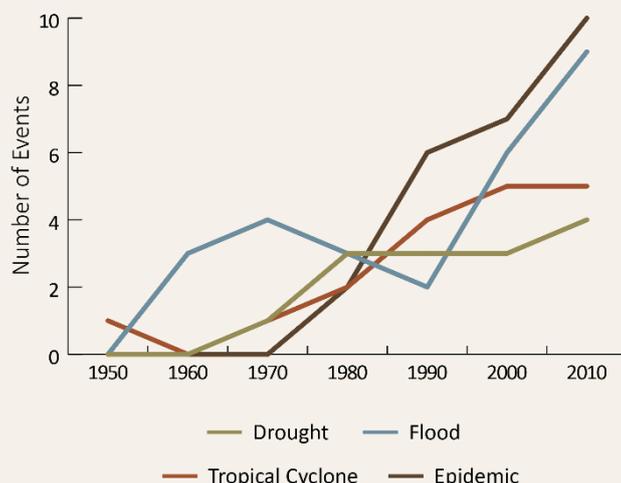
2. EMERGENCY IN MOZAMBIQUE

Mozambique is a country highly vulnerable to natural disasters. In the last 30 years alone it has experienced more than 40 cyclones⁷. From 2019 to 2022, for example, it recorded the most drastic destructions in its history as a result of consecutive natural events. Cyclones Idai and Kenneth in 2019, which hit the central and northern parts of the country, preceded by floods, caused destruction of more than 700 hectares of crops, forcing the displacement of about 420,000 people and causing the death of more than 600 people, as well as more than 2.5 million people in need. The school and health network experienced severe material damage⁸. Cyclones Charlene in 2020, Eloise in 2021, Guambe in 2021, Ana and Gombe in 2022, will worsen the already drastic humanitarian crisis situation. Moreover, the country has recurrent drought and flood situations that result in hunger crises and the precariousness of the main public services.

Graphic 1. Frequency of flood, cyclone and drought situations and affected population in Mozambique (1956-2020)



Graphic 2. Tendency of extreme events in Mozambique (1956-2010)



Source, Graphic 1: Vnio A. Mugabe et al., "Catstrofes Naturais, Deslocaes Populacionais e Emergncias de Sade...", op. cit. p.2
 Source, Graphic 2: INGC, 2017, p. 19

⁷ Maria Moitinho de Almeida and Debarati Guha-Sapir, 'Why Mozambique's Cyclones Tell Us Disaster Preparedness Needs Health at Its Core', The BMJ, 10 May 2019, <https://blogs.bmj.com/bmj/2019/05/10/mozambiques-cyclones-disaster-preparedness-needs-health-core/>.

⁸ OCHA. Southern Africa: Tropical Cyclone Kenneth Flash Update No. 7 (2 May 2019) [Internet], 2019. Available: <https://reliefweb.int/report/mozambique/southern-africa-tropical-cyclone>.

The resurgence of military conflicts in the central region since 2012, with intermittent⁹ periods, and the outbreak of violent extremism¹⁰ since 2017 in the north of the country, Cabo Delgado and Niassa, are other aggravating factors that have made recovery even more difficult. Both natural disasters and the military conflict situation have not only contributed to the destruction of the hospital network, limiting access to health services for the population, but have also resulted in serious public health emergencies¹¹.

Extreme natural events often result in outbreaks of cholera and other diarrhoeal diseases. These situations have shown how the sector faces problems in terms of preparedness and response to public health emergencies. The sector does not yet have a consolidated structure to cope with the various demands in real time¹². In situations of imminent public health emergencies, the response capacity of the sector has been delayed, only for a short period of time and, due to resource constraints, without responding fully to the demand.

However, without a structure adapted and functional for a rapid response, with limited funds and dependent on external funding, in addition to not having adequately prepared staff, as well as a complex decision-making process that is strongly centralized in the MISAU, the sector still needs to adjust to the challenges of public health emergencies¹³. The country's response to emergencies has not only been ad hoc and focused on short-term response, but has also not resulted in the design of systems to assess and monitor potential situations¹⁴. Efforts to set up the public health emergency system are still at an embryonic stage and lack the capacity to deal with the country's vulnerability to public health emergencies.

2.1. ACCUMULATED EXPERIENCES IN PUBLIC HEALTH EMERGENCY MANAGEMENT IN MOZAMBIQUE

In general, Mozambique implements an emergency response system. Its multi-hazard exposure situation has driven the development of national emergency preparedness and response mechanisms for multi-hazard emergencies and the development of response plans covering surveillance, risk communication and public communication (see the general emergency coordination chart below), especially for natural disasters.

⁹ Colin Darch, *The Mozambican Conflict and the Peace Process in Historical Perspective: A Success Story Gone Wrong?*, Friedrich-Ebert-Stiftung (Maputo: Friedrich-Ebert-Stiftung, 2018).

¹⁰ Saide Habibe, Salvador Forquilha, and João Pereira, *Radicalização Islâmica No Norte de Moçambique. O Caso de Mocímboa Da Praia*, Caderno IESE n. 17 (Maputo: IESE, 2019).

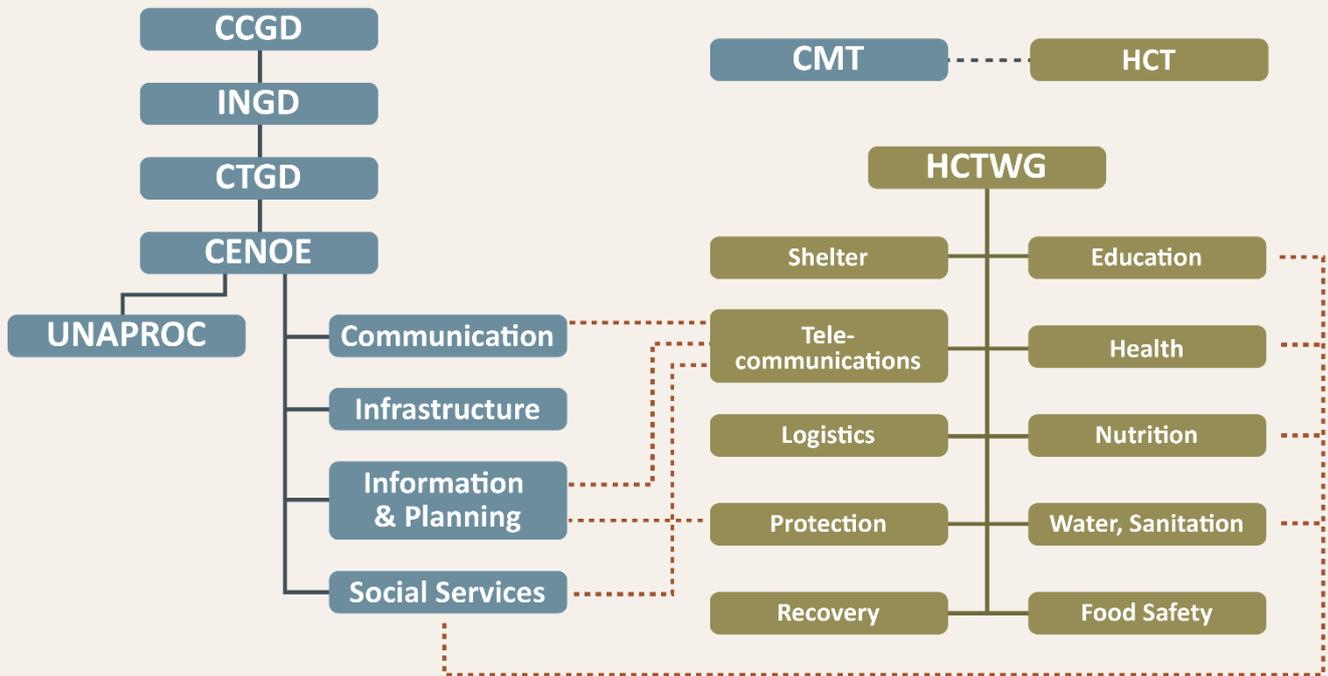
¹¹ World Health Organization, *Joint External Evaluation of IHS Core Capacities of Republic of Mozambique*, WHO, 2016.

¹² Vánio A. Mugabe et al., 'Natural Disasters, Population Displacement and Health Emergencies: Multiple Public Health Threats in Mozambique', *BMJ Global Health* 6, no. 9 (1 September 2021): e006778, <https://doi.org/10.1136/bmjgh-2021-006778>.

¹³ Ministério da Saúde, *Revisão Inter-Ação da Resposta da pandemia da COVID-19 em Moçambique*, Maputo, Dalberg & VillageReach, 2020.

¹⁴ Mugabe et al., 'Natural Disasters, Population Displacement and Health Emergencies'.

Graphic 3. Organization Chart of the Coordination Mechanism between the Government and the Humanitarian Team



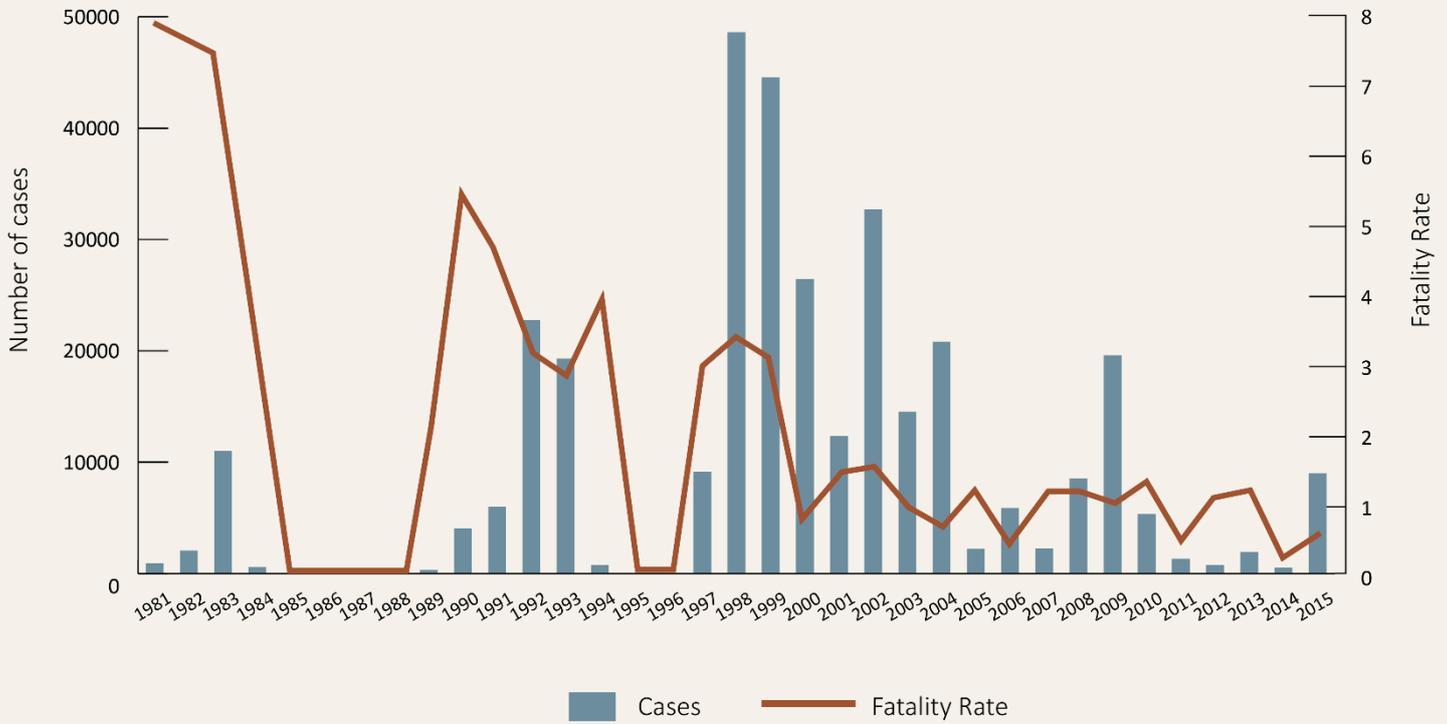
Source: INGD, 2021, p.64¹⁵

As can be seen, the health sector is part of a general multisectoral approach to coordinating emergency situations, natural disasters and others that arise in the country, under the coordination of the National Institute for Risk Management and Reduction of Disaster. Within the multi-sectoral organic structure, the National Emergency Operational Centre (NEOC) is the main actor and acts mainly in natural disasters and emergencies where a national response is required. Public health emergencies, as can be inferred, are not the main focus of the approach.

At the level of epidemiological emergency preparedness, mitigation and response, activities are coordinated by the MISAU in collaboration with other government institutions and partners (donors, private for-profit sector, social organizations). In this regard, the Mozambican health sector has considerable experience in the management of epidemiological diseases such as cholera and other diarrhoeal diseases (associated with sanitary conditions).

¹⁵ INGD, *plano anual de contingência 2021-2022*, Aprovado pela 37a Sessão do Conselho de Ministros, de 26 de Outubro de 2021.

Graph 4. Outbreak cases and case fatality rate (1981-2015)



Source: Department of Epidemiology/MISAU¹⁶

According to the Organic Statute of the Ministry of Health¹⁷, it is through the National Directorate of Public Health that the sector "coordinates with other institutions to prevent and respond to outbreaks, epidemics or other public health emergencies"¹⁸. This directorate is also responsible for developing and implementing the rapid response centre for epidemics and other emergencies in coordination with other sectors¹⁹.

¹⁶ National Directorate of Public Health, Manual for the Prevention and Control of Cholera and Other Acute Diarrhea, Maputo, MISAU, 2016.

¹⁷ Resolution n. 4/2017, of May 26, which approves the Organic Statute of the Ministry of Health, BR úde, BR. N. 82, I Serie.

¹⁸ Ibidem, art. 8.

¹⁹ Vide as alíneas viii e ix do artigo 8 da Resolução n. 4/2017, de 26 de Maio...op. Cit.

Table 1 Composition of the Health Emergency Committee

Multisectoral Committee for Health Emergencies		
National	Provincial	District
Ministry of Health	Provincial Health Director	Set up Committees with a composition similar to that of its province
Ministry of State Administration and Civil Service	Mayor of the Municipality	District Administrators should lead the committee
Association of Municipalities	Representatives of the Provincial Directorates of Public Works, Education, Gender and Environment	
Ministry of Education and Human Development	Representatives of Political Parties	
Ministry of Public Works, Housing and Water Resources	Religious organizations	
Ministry of Land, Environment, and Rural Development	Representatives of N.G.O.	
Ministry of Justice, Constitutional and Religious Affairs	Representative of the CVM	
Ministry of the Interior	Representative of the Practitioners of Traditional Medicine	
Ministry of Children, Gender and Social Action	Cooperation Partners	
Ministry of National Defence	Private Sector	
National Institute for the Inspection of Economic Activities		
GABINFO		
Cooperations Partners		
Private sector of health service delivery		
Representative of the Mozambique Red Cross (CVM)		
Representatives of the United Nations and NGOs		
Civil society (community leaders, religious leaders and traditional medicine practitioners)		

Source: MISAU, 2016

To improve preparedness and increase capacity to respond to public health emergencies, the MISAU has developed a plan to establish a Public Health Emergency Operating Centre (PHEOC). This has been established from 2019. In theory, its fundamental function would be to act as a centralized structure for the coordination, command and control of preparedness and response actions to public health emergencies²⁰. In line with the implementation of the International Health Regulations-2005²¹, worldwide, the establishment of PHEOC has been a good practice in public health emergency management²².

The first assessments made, in the context of the COVID-19 pandemic emergency, showed, however, that PHEOC, at the national level, faced some constraints in coordinating responses, as envisaged in its creation²³. The failure was partly due to the gestation phase the various dimensions (institutional, organizational and material) were still in. The position assigned to PHEOC in the organic structure of the MISAU meant that it was unable to fulfil its main role, which was to coordinate response to emergencies.

The COVID-19 pandemic emergency, however, provided an opportunity to reflect on revitalizing PHEOC. The coordination of the response given to the pandemic of COVID-19 showed how a properly established, equipped and staffed PHEOC could have better addressed the various public health emergencies.

2.2. PANDEMIC RESPONSE TO COVID-19 AND REVITALIZATION OF PHEOC

The emergence of the COVID-19 pandemic served as a gauge of the level of compliance with best practice guidance on establishing PHEOC²⁴. In general terms, PHEOC are established everywhere to function as 'epidemiological intelligence centres' for public health emergency management²⁵. This is, in concept, a device and platform for central coordination and strategic guidance of the Incident Management System (IMS). For the Mozambican case, the PHEOC had been created in 2019 to serve as a command and control device, as a structure par excellence, centralized to support the coordination of public health emergencies²⁶. But the reviews relating to the start of the pandemic showed that it was not up to the task of performing its central coordination position. The support that PHEOC provided to the sector was not significant in responding to a strong public health demand. In fact, the body was created without yet changing the legal framework of the sector that would give it more powers to act as expected (see below).

Indeed, the national plans for pandemic preparedness and response to COVID-19 have not assigned PHEOC a clear and central position in strategic coordination²⁷. In part, its position on the MISAU organizational chart did not allow it to have the administrative power to develop an integrated approach with other sectors. In the administrative arrangement within the organic statute of the MISAU, PHEOC is inserted in the National

²⁰ Assembly of the Republic, Draft Public Health Law, Maputo, December 2021 version.

²¹ World Health Organization. International Health Regulations (2005)...op. cit.

²² World Health Organization, *Framework for a Public Health Emergency Operations Centre*, Geneva, World Health Organization, 2015.

²³ Ministry of Health, Inter-Action Review of the COVID-19 pandemic response...op. Cit.].

²⁴ [World Health Organization, 'Investing in and Building Longer-Term Health Emergency Preparedness during COVID-19 Pandemic: Interim Guidance for WHO Member States' (Geneva: World Health Organization, 2020).

²⁵ Public health emergency operations centres strengthened through training. World Health Organization website. <https://www.afro.who.int/news/public-health-emergency-operations-centres-strengthened-through-training-0>. Accessed 28 June, 2020.

²⁶ [Ministry of Health, Inter-Action Review of the COVID-19 pandemic response...op.cit.].

²⁷ [Ministry of Health, National Plan for Pandemic Preparedness and Response to COVID-19, Maputo, MISAU, 2020; Ministry of Health, Strengthening Public Health Emergency Preparedness and Response in Mozambique: Evaluation of the Current PHEOC & Case Studies from across Sub-Saharan Africa, Maputo, Dalberg & VillageReach, 2021.]

Directorate of Public Health, which does not allow it to have relevance in coordination, especially for a multisectoral approach²⁸.

In a context of PHEOC's fragility, the political commitment of the leadership, namely the President of the Republic and the Council of Ministers, as well as the rapid technical reorganization of the sector, guaranteed above all by the Minister of Health, was of great value in preventing and responding to the COVID-19 pandemic emergency.

Commitment of the President of the Republic and his Council of Ministers was key to multisectoral engagement in the response to the COVID-19 pandemic. Even before the registration of cases in Mozambique, the Government (Council of Ministers) produced acts that resulted in widespread engagement and the production of guidelines in almost all sectors. Following this, the President of the Republic, through Resolution n. 20/2020 of 25 March, created the multidisciplinary Technical-Scientific Commission that permanently advised on the type of decisions that should be taken to mitigate the spread of the pandemic. This Commission was relevant in producing consensus on the approaches to be implemented in various sectors. In addition, through the National Institute of Health (NIH), sero-epidemiological surveys were carried out that not only reinforced the availability of quality information but also provided scientific guidelines on procedures and decisions to be followed.

The organization of the Technical Working Groups was another fundamental aspect in mitigating and responding to the spread of COVID-19. The Minister of Health, in addition to chairing the Scientific-Technical Commission, quickly managed to involve all the sub-sectors of his ministry while assuming the coordinating position. Not only did he ensure alignment of decisions of the Council of Ministers and the Ministry, but he also activated the Emergency Committee to coordinate responses to the pandemic and other public health emergencies. He established a functional structure of Technical Working Groups that ensured the day-to-day management of the pandemic responses. Its leadership role ensured that the MISAU produced timely proposals for responses to address the spread of the pandemic.

Through the Emergency Committee and Technical Working Groups, a multiplicity of actors was engaged, from the public and private sector as well as Civil Society Organizations.

²⁸ Resolução n. 4/2017, de 26 de Maio, que aprova o Estatuto Orgânico do Ministério da Saúde, BR. N. 82, I Série.

Table 2. Members of the Emergency and Technical Working Groups

Working Group	Member
Emergency Committee	National Directorate of Medical Assistance National Directorate of Public Health National Directorate of Human Resources Directorate of Administration and Finance Mozambique Medical Emergency Services Department of Communication and Image Department of Infrastructure and Hospital Equipment
Epidemiological Surveillance	National Directorate of Public Health National Institute of Health
Clinical Care Management	National Blood Service National Directorate of Health Professionals National Directorate of Human Resources National Directorate of Traditional and Alternative Medicine Mozambique Emergency Medical Services National Directorate of Medical Assistance
Laboratory Diagnosis	Centralised Medicine and Medical Supplies Provincial Government World Health Organization Centre for Disease Prevention and Control CHAI United Nations Children's Fund World Bank Manhica Health Research Centre Eduardo Mondlane University Biotechnology Centre of Eduardo Mondlane University
Information, Education and Mobilization Community and Infrastructure	National Directorate of Public Health National Directorate of Traditional and Alternative Medicine Department of Communication and Image National Directorate of Medical Assistance Other State Institutions and Partners
Logistics Chain and Infrastructure Management	National Directorate of Medical Assistance National Directorate of Pharmacy National Institute of Health Directorate of Administration and Finance Central Supply Central Department of Infrastructures and Hospital Equipment
Monitoring and Evaluation	DNAM National Directorate of Public Health National Institute of Health

Financial and Human Resources Management	Directorate of Human Resources Directorate of Administration and Finance
Technical and Methodological Advice for the Emergency Committee	CDC World Health Organization UNICEF

Source: adapted from document, Ministry of Health, Inter-Action Review of the COVID-19 pandemic response...op.cit.

Learning coordination and collaborative communication - even if at the beginning of attempts at coordination between different technical groups - did not show encouraging results, learning was structured and coordination and communication between the actors involved improved in the preparation of the activity plans.

One of the major limitations noted was the fact that the Emergency Commission did not have a clear mandate on the coordination role of the teams of the technical working groups. Interviewees generally acknowledged that the work coordinated at the central level was complex and needed better allocation of competencies, especially of the Commission responsible²⁹. Despite this, the activities were not unviable because there was always an occasional intervention from the sector leadership through the regular meetings of the Emergency Committee, specifically the Technical-Scientific Committee. The major challenge, according to the informants, was linked to insufficient resources or inability to conduct rapid identification of specific needs in specific locations, particularly financial and capacity building/training of the members of the groups on emergency issues.

Decentralization reform and coordination with local levels – through a constitutional amendment, Law n. 1/2018, of June 12, the local governance structure was recently changed, especially for the provincial levels³⁰. The new structure of local administration still faces some difficulties in coordination between the organs of local power and those of local representation of the State, namely the provincial government and the representation of the State in the province. The decentralization process still lacks clarity on the roles of the different actors. Thus, coordination has often depended on the nature of the leadership involved. Coordination between the central and local levels was not always synchronised, as was observed in particular in the education sector with the closure of some schools that had registered positive COVID -19 cases.

The MISAU's good practices in responding to COVID-19 were not the result of a stable public health emergency management framework. Undoubtedly, coordination efforts in the response to the pandemic of COVID-19 resulted in controlling the spread and reducing its effects. The capacity for control was, however, not necessarily associated with the existence of a clear public health emergency response system. According to the data collected, the engagement of government and sector leadership was among the main elements in coordinating the response. The engagement in coordination was not based on a clear structure so much so that the sectors and officials engaged were learning to collaborate throughout the process. The absence of a fully institutionalised response system made it impossible to align the implementation of response plans with COVID-19.

²⁹ [Ministry of Health, Inter-Action Review of the COVID-19 pandemic response...op.cit.].

³⁰ [Law n. 1/2018, of June 12 significantly altered the local governance architecture and created, at local level, new administrative structures. The materialization of this new figure by Law n. 4/2019, of May 31, and Law n. 7/2019, of May 31, reconfigured the competences of management of water and sanitation services at the local level.].

The issue of low level of institutionalization of the response approach stimulated certain heterogeneity of interventions, between the planning of the Emergency Commission at central level and the provincial Emergency Operating Committees. Even with the activation of the Emergency Operating Committees in the provinces, the absence of clear guiding scripts on COVID-19, especially the lack of knowledge about the pandemic created a misalignment in some responses between the local levels and the central guidelines, as observed, for example, in the education sector on case identification and school closure. The central bodies, notably the Emergency Committee, did not clearly guide the local levels on the specific responses to be taken in certain identified cases. This role was often assumed by the Council of Ministers and, above all, through communications from the President of the Republic.

Overall, the management of the COVID-19 pandemic served as a lesson for more institutional preparedness and response mechanisms to enter the political agenda as a priority. Experience of the coordination, communication and collaboration modes of this pandemic have shown that better institutional organization with an integrated and functional mechanism to guide actions can contribute to management of public health emergencies. The need to structure PHEOC is therefore a priority agenda. The MISAU recognises that this must be a commitment to establish a functional system of preparedness and response and in readiness to coordinate and guide public health emergency actions³¹.

LESSONS LEARNED

- Maintain the public and private and civil society continuity in the emergency management process;
- Improving healthy hygiene practices;
- Need for attention to mental health component;
- Exigence of human and financial resources;
- Overload of health professionals, coupled with lack of specific training to respond to public health events (surveillance);
- Mobilization of insufficient financial resources;
- Mozambique is vulnerable to extreme natural events with serious public health consequences;
- The absence of a consolidated system for public health emergency preparedness and response hinders the multisectoral approach in emergency situations;
- The difficulty in making PHEOC operational did not allow for a structured and coordinated response to the COVID-19 pandemic emergency.

GOOD PRACTICES

- Preparation of a manual for response to public health emergency events;

³¹ Ministry of Health of Mozambique, "Plano Nacional de resposta a Pandemia do COVID-19 Update 2021", Maputo, MISAU, 2021

- Existence of a virtual structure involving all directorates (working groups);
- Replication of the structure at provincial and district level;
- Inclusion of cooperation partners in all phases of response implementation;
- The country has a long experience of managing emergency situations from extreme natural events that can serve as a learning base for the public health emergency preparedness and response system;
- The health sector has experience in responding to epidemiological outbreaks that enables it to have a rapid organizational capacity in case of emergency;
- The commitment of the leadership of the President of the Republic and his Government as well as the Minister of Health, demonstrated during the COVID-19 pandemic, was an opportunity to design and implement a multisectoral approach for public health emergency response;
- The establishment of the Emergency Commission and the technical working groups, revealed the level of organization required for an adequate response to the emergency in terms of coordination and multidisciplinary approaches to achieving results.

3. REVITALIZATION OF THE PUBLIC HEALTH EMERGENCY CENTRE

For the proper functioning of PHEOC a coherent normative framework, which allows for the definition of the vision and mission as well as the definition of the principles of organization and functioning, is essential³². The framework should inform and establish the parameters of action for public health emergencies and also ensure flexibility of preparedness and response in case of activation of incidents. Issues of a normative nature are indicative of the level of preparedness. The public health emergency operating framework in Mozambique is still incipient. The recent approval of the Public Health Law is an opportunity to establish clear competencies and responsibilities among different actors and levels of organization of the public health emergency preparedness and response system.

3.1. PUBLIC HEALTH EMERGENCY INSTITUTIONAL FRAMEWORK

Approval of the Public Health Law as an opportunity for PHEOC – the Mozambique Parliament approved the public health law that includes, among other matters, the response to public health emergency challenges through the creation of the PHEOC³³. This new instrument opens up a space for better structuring and functioning of the PHEOC, attributing competence and position of relevance in matters of public health emergency management.

The Public Health Law defines PHEOC as an authority body that "is responsible for preparing contingency plans and action protocols in a timely manner for the various types of Public Health emergency situations."(see Art.47)³⁴. The law grants the PHEOC legal authority to materialize coordination actions in preparation for and response to public health emergencies.

³² World Health Organization, *Framework for a Public Health Emergency Operations Centre*.

³³ Lei n. 3/22, de 10 fevereiro, Lei de Saúde Pública.

³⁴ Ibidem.

The PHEOC Regulation is a matter of high priority. Once the ordinary law that defines, in general terms, the matter of a public health emergency has been approved, its implementation is highly dependent on appropriate regulation. In this regard, the experience of the collaborative approach in coordinating the response plans to the COVID-19 pandemic is undoubtedly a privileged subject to be used as a basis for drawing up the instruments to materialize PHEOC. According to those interviewed, the new PHEOC design framework should enable it to be an integrating platform for all actors involved in public health emergency matters. The health sector, including public sectors, cooperation partners, private actors, civil society, communities, etc., should feel an integral part of the design of a coordination device for preparedness and response to public health emergencies. As one interviewee put it:

"[...] the sectors must maintain the culture of having a sort of focal point in public health emergencies [...], one cannot lose this culture of communication that we had during COVID-19. When we have a public health emergency situation we cannot waste time looking for who we have to coordinate with, who we have to channel information to, how we have to respond in a given sector. The participation/collaboration of banks, churches, media companies, the private sector in general was interesting. This should be the design culture of PHEOC. PHEOC is not the MISAU, we are all of us and we should conceive the process from the beginning as integrated [...]"³⁵.

The regulation, in this sense, is the main instrument that can enable PHEOC to bring together the powers of multisectoral coordination in preparation for and response to any public health emergency.

It is acknowledged, however, that for its functionality, the legal-institutional framework is not enough for the public health law and its regulation, other complementary matters are essential for cases of public health emergency. For example, procurement³⁶ and the mechanisms for recruitment and selection of human resources³⁷ are essential matters for the operation of PHEOC, especially during times of alert activation. Administrative procedures may affect the success of the response to extreme events.

3.1.1. POSITIONING OF PHEOC AS A STRATEGY TO ENABLE BETTER COORDINATION

The issue of anchoring the ESPC is essential to the nature of its powers and therefore the power it exerts in preparing for and responding to any kind of public health emergency. According to the Inter-Action Review of the COVID-19 pandemic response report³⁸. As well as the assessment of the status of the current PHEOC³⁹, it

³⁵ N.M, entrevista, Maputo, 08 de fevereiro, 2022.

³⁶ legislation [Decree n. 5/2016 of 8 March, which approves the Regulations for Contracting Public Works Contracts, Supply of Goods and Provision of Services to the State.

³⁷ [Law n. 10/2017, of 1 August, approving the General Statute of State Employees and Agents. The recently updated Statute of State Employees and Agents waives the need for public competition for hiring employees in the event of public calamities and emergencies]

³⁸ [Ministry of Health, Inter-Action Review of the COVID-19 pandemic response in Mozambique, Maputo, Dalberg & VillageReach, 2020.

³⁹ Ministry of Health, Strengthening Public Health Emergency Preparedness and Response in Mozambique: Assessment of the Current PHEOC & Case Studies from across Sub-Saharan Africa, Maputo, Dalberg & VillageReach, 2021.

has not been exercising the competencies expected of it, namely central coordination of preparedness and response to public health emergencies. The outbreak of the COVID-19 pandemic was an example of this, such that it only served as a data management structure in the Surveillance Department of the National Directorate of Public Health. In the response activities to COVID-19, it was mainly the Emergency Committee and the Technical Working Groups that assumed the most dynamic roles in the process (cf. above).

PHEOC's position is too subordinate to be able to exercise its responsibilities as the central coordinator of public health emergency preparedness and response. The interviewees, especially those at the MISAU level, recognised the irrelevant position of the PHEOC for it to be able to perform the expected functions. For them, in a situation where the current PHEOC is without a strategic position, without specialized and trained personnel, without sufficient material resources, it would be very difficult for it to have the capacity to impose itself and articulate complex functions of coordinating public health emergencies at the national level.

A comparative census of other African countries - which have moved ahead in structuring PHEOC, especially those in West Africa - indicates that they have assigned it a strategic position, linking it to the top of the political and administrative structure of the health sector. It is because, as shown in the case of COVID-19, there is much political commitment that must be mobilised for overall coordination in public health emergency preparedness and response. Two examples seem to be stimulating for understanding the need for PHEOC's strategic position:

Senegal - even if the anchoring of PHEOC has changed with the experience of emergency management - at first within the Ministry of Health, under the direct tutelage of the Minister of Health, later with a certain autonomy, but still under the tutelage of the Ministry⁴⁰ - it was given enough relevance to act with some level of autonomy. The PHEOC in Senegal enjoys administrative and financial autonomy. In administrative terms, it has its own procedures that enable it to carry out administrative activities adapted to its mission. In financial terms, the PHEOC in Senegal has its own budget as well as a bank identity through which it mobilizes and receives various support.

Its legal personality and autonomy allows it to act proactively in multi-sectoral coordination. Initially integrated into the Minister overseeing the health sector, as it gained experience with emergency management it simultaneously gained autonomy and relevance in public health emergency preparedness and response. This is why it is cited in the region as the successful example in establishing integrated, high-level preparedness mechanisms.

Nigeria - is another country with some experience with legal authority for public health emergency management. In Nigeria, the body also has administrative and financial autonomy. Its funds are channelled directly to its bank identities. The government provides funding through the general budget. And the centre directly mobilises international partners and establishes accountability mechanisms. In both Nigeria and Senegal, the public health emergency preparedness and response bodies are strategically positioned at a level that allows them to coordinate using a multisectoral approach⁴¹.

Evidently, the position in the organizational chart confers or detracts from the ability to influence the dynamics of coordination in preparation for response to public health emergencies. In the case of Mozambique, all informants revealed that it was important to restructure PHEOC and give it a strategic

⁴⁰ O Centre des Opérations des Urgences Sanitaires (COUS) do Senegal dispõe inclusivamente de uma página electrónica autónoma do Ministério de Saúde (vide <http://www.cousenegal.sn/>).

⁴¹ Vide para detalhes Ministério da Saúde, Reforço da Preparação e Resposta à Emergência de Saúde Pública...op.cit.

position. For them, the PHEOC should report directly to the Minister who oversees the health sector in coordination with the other sectors, drawing in particular on the experience of the CENOE, since it is a platform for multi-sectoral collaboration. The position of PHEOC must guarantee the attraction of competent staff and be able to mobilize various funds, from both cooperation partners and the private sector (see below).

The legal regime defined by the recent public health law gives the PHEOC the power of direct relationship with the Minister of the health sector. Article 47(2)⁴², which establishes the PHEOC, states that:

“[...] the Public Health Emergency Operating Centre is responsible for monitoring the progress of health disasters, keeping the Minister who oversees the health area informed at all times [...]”.

The law empowers PHEOC to be an authority for direct interaction with the Minister in the health sector. Its position thought of in these terms, would be both a guarantee of multi-sectoral coordination powers and of attracting political will. Indeed, the results of PHEOC should be at the intersection between technical functionalism and mobilization of multiple actors. To this end, a strategic position is determinant, particularly for the capacity to articulate interests.

3.2. PUBLIC HEALTH EMERGENCY ORGANIZATIONAL ISSUES

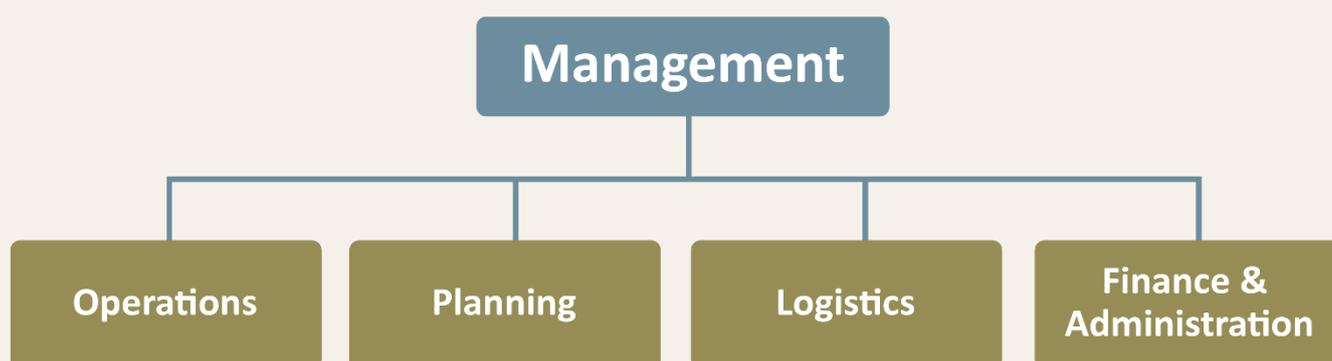
The organization of PHEOC depends on the availability of qualified human resources, physical infrastructure, operational technology and financial resources. We describe here two important indicators of PHEOC's operationalization: First, the organizational perspective focusing on the human resource structure. Second, the management and funding procedures for public health emergency activities.

3.2.1. ORGANIZATIONAL STRUCTURE OF PHEOC

As presented above, PHEOC currently operates as a branch of the Health Surveillance Department of the National Directorate of Public Health. Some conceptual documents, mainly based on WHO manuals, define the internal structure in general terms of the international recommendations on the functions of the Incident Management System, without therefore having been adjusted to the dynamics of the sector in Mozambique. Thus, PHEOC would be subdivided into five areas: (i) Management (Direction), (ii) Operations, (iii) Plans, (iv) Logistics and (v) Administration and Finance. This is, in fact, a common structure for the management of all types of hazards and emergencies (these are common functions of the Incident Management System).

⁴² [Law no. 3/22, 10 February, op. cit.],

Graph 5.



Source: World Health Organization, p.16⁴³.

A more objective definition of the internal structure of PHEOC, for the specific case of Mozambique, would require adaptation to the legal propositions and, more specifically, to the experience of managing public health emergencies. The regulation and design of the organic structure can also be contextualized based on the experience of the functioning of the Emergency Commissions and Technical Working Groups during the COVID-19 pandemic, namely on aspects related to coordination and planning, as presented above (cf. 2.2.). Some informants, for example, stressed the need for the internal structure of PHEOC to include a fund mobilization and partnership management body. The structure can be adjusted and adapted, both at the technical and strategic level, depending on the type, magnitude and context of the emergency⁴⁴. The final structure of PHEOC will depend on discussions at the MISAU level, taking advantage of the legal opening in the regulatory process of the public health law.

The full operation of PHEOC depends on the provision of competent and trained human resources. PHEOC must be equipped with the best staff with a command of the main components of emergency management in public health, information technology, statistics, geography, demography, etc. According to what is documented, the envisioned structure is made up of two constituents: one composed of permanent staff and the other of seasonal or reinforcement staff (non-permanent):

- **Full-time staff would be responsible for the day-to-day work of the PHEOC**, occupying key positions in the internal organization chart - namely management committee (steering), planning, logistics, finance and administration. They would also be in charge of routine activities, including

⁴³ Organisation Mondiale de la Santé. Bureau régional de l’Afrique, *Centre d’opérations d’urgence de santé publique (COUSP)*, 2015, p.16. *Guide du cadre juridique : guide pour l’élaboration d’un cadre juridique autorisant la création et l’opérationnalisation d’un COUSP*, 9789290313373 (Brazzaville: Organisation mondiale de la Santé. Bureau régional de l’Afrique, 2021), <https://apps.who.int/iris/handle/10665/345556>.

⁴⁴ [Alhaji Aliyu, 'Management of Disasters and Complex Emergencies in Africa: The Challenges and Constraints', *Annals of African Medicine*, 2015.].

non-emergency alert periods. According to informants, for the permanent structure, the ideal would be to form a flexible, simple and less costly organizational chart in terms of wage bill. This would be composed of high-level specialists, subject to continuous training and in-depth knowledge of the public health emergency management system.

In the aspect of human resources recruitment, in contexts of emergencies, the adaptation of legislation must be underlined. The regulation of the General Statute of State Employees and Agents⁴⁵ allows for the waiver of competitions for the recruitment of human resources as a response to emergencies. This is an important step towards adapting the State's entire human resource management administrative system in preparation for an integrated approach to emergency management, in particular public health.

- **As for non-permanent staff, it would be made up of support teams** who would have a rotating role in monitoring the operationalization of the PHEOC. These could come from the different health subsectors, but not exclusively, with other relevant areas being able to integrate the team according to the demand of the emergency case. A roster would be set up so that instead of routine activities, sometime would be dedicated to supporting the operationalization of the PHEOC especially at the time of its deployment in the alert phase of an eminent public health emergency. According to the data from the workshops⁴⁶. However, the difficulties of qualified human resources should dictate a specific contextualization of PHEOC, adapting to the challenges of the country. During the peak period of the COVID-19 pandemic, for example, many of the specialists who supported emergency management, especially since the establishment of the Technical Working Groups, were also staff from other areas who gave up their routine activities to more actively assist in the management of the response. Experience showed that there was a relatively stable operability, even if at the beginning of the process there was weak synchronization. The main challenge was mainly a lack of training in emergency response.

Capacity building of staff would be designed for public health emergency skills development plans. During the COVID-19 period, among various activities, VillageReach developed training plans and trained Public Health Residents and the MISAU staff. In these trainings, among various subjects, topics on activation of operations, development of incident response plans, documentation of best practices, preparation of monitoring plans, logistics, etc. were addressed. The evaluation done, before and after the training, showed that the trainings brought important results in socializing the Public Health Residents in specific aspects of emergency management⁴⁷. Capacity development plans should be continued in PHEOC operationalization roadmaps, expanded and integrating various intersectoral public health emergency actors, including community structures.

⁴⁵ [Decree n. 5/2018, of 26 February, which regulates Law n. 10/2017, of 1 August.]

⁴⁶ [PHEOC, Report of the Workshops on Development of the Mission and Vision of PHEOC, Maputo, VillageReach & Dalberg, 2021

⁴⁷ [PHEOC, Monthly report on the support to the coordination of the response to COVID-19 (September 2021 update), Maputo, VillageReach, 2021; PHEOC, Plan for the Development of Competencies, Maputo, VillageReach, 2021.].

Virtual PHEOC may be an option in a first phase characterised by few specialised human resources

In relatively complex context for the organization of a functional PHEOC, there is so far no legal instrument that defines the composition, functions and competencies, infrastructure, nor senior specialized resources for the planned functions. Some stakeholders, supported by the WHO guidelines - according to which the assembly of the PHEOC can be adjusted and adapted to the challenges of the implementing country - mentioned that Mozambique can, in a first phase, bet on a virtual mechanism. Instead of the PHEOC collecting and systematizing the information, it can, in this first stage, function as a server that receives information processed by specialists from the various sectors. In this phase, the PHEOC would only be a kind of information sharing space, with an alert system according to the information shared and the risks that are relevant. The important thing would be to have a functional system while the necessary material resources were not available.

The small team assembled for the operationalization of PHEOC would gradually integrate as facilitators of the platform. Ongoing training would ensure expertise in information management and coordination. Based on the Technical Working Groups, formed during the COVID-19 response, the small group of PHEOC experts was to inherit the memory of collaborative management and keep it up-to-date⁴⁸. At the level of the entities involved, the PHEOC regulations to be designed were to include the institutionalization, in the different relevant areas, of groups of experts who would share information with PHEOC.

In sum, in the perception of informants, a truly functional PHEOC should adapt to the (various) constraints of the country and form as a space for intelligence, information centralization and coordination of public health emergencies.

The human resources dimension was identified by all informants as one of the main challenges for the operationalization of PHEOC. In addition, according to them, the Mozambican health sector should not only depend on the goodwill of the cooperation partners. The Government should assume the PHEOC as part of its priorities for organizing health policy, in particular by taking the legal reform and response to the various extreme events that challenge health service provision as an opportunity.

3.2.2. OPERATION OF PHEOC

PHEOC's concrete action is highly dependent on the availability of instruments and working mechanisms, such as programmes and plans of activities that can be put into practice. At the time when information was collected for this document, many of the instruments that could guarantee concrete action were still being designed.

PHEOC Strategic Plan still under preparation. There is a general plan designed based on the Incident Management System. It is a document based on the general matrix, and the PHEOC Strategy is still in the process of being designed. This document will seek to safeguard the Mozambican context. The mission and vision of PHEOC, as well as the objectives, are the guidelines for the construction of operational plans, based

⁴⁸ [ESG, interview, Maputo, 21 February, 2022.

on clear indicators and targets. Furthermore, the strategic plan must influence the complementary regulations to the Public Health law in the specific matter of PHEOC.

Preparation of a roadmap for the implementation and operation of PHEOC. Another important document for the implementation and definition of PHEOC's plan of activities - still in preparation - is the roadmap. This document is in its final stage and is under discussion between the cooperation partners, including VillageReach and the MISAU. Through this document it will be possible to visualize even better the concrete actions of PHEOC, both in its revitalization as well as in the realization of its activities.

Manuals and Standard Operating Procedures – PHEOC is involved in the development and updating of public health emergency manuals based on a cycle-oriented design to manage emergencies of all kinds. According to informants, the plans in place so far are mainly for the major outbreaks the country has experienced such as cholera and other diarrhoea. The SOP design process will be aligned with the restructuring of PHEOC - some informants mentioned.

The design of these plans and their implementation must be accompanied by the systematization of a monitoring and evaluation mechanism. The operational axes of the roadmap, objectives and indicators, will be monitored.

3.3. INFRASTRUCTURE AND MANAGEMENT PROCEDURES

At the time of data collection for this documentation, the issue of identifying the space for PHEOC to operate was not seen as a priority, probably due to the lack of a complete legal definition. Ongoing planning indicates that between the months of February and March 2022, one of the tasks could be to identify a physical location for PHEOC⁴⁹. This activity was also indicated as dependent on the final definition of the position of PHEOC, whether it is integrated at the level of the MISAU, or defined as an organ that is only supervised, with administrative and financial autonomy.

Technological infrastructures – although not yet fully developed, PHEOC has some technological equipment to support information management and sharing. In fact, during the COVID-19 pandemic, the use of dashboards (information system for collecting, processing and sharing information) was mentioned as a good practice. However, the use of technology for public health emergency needs advanced training. For the proper functioning of PHEOC, in terms of communication and information management, it would not only need to strengthen training, but also to be provided with adapted infrastructure, including the assembly of operational software.

During the period of the COVID-19 pandemic, the exploitation of information and communication technologies (ICTs) to interact with communities, whether to clarify prevention mechanisms or to mediatize response measures was essential and allowed MISAU to expand information and avoid fake news. A much referenced example was the AlôVida programme, which relied on the partnership between MISAU, FDC and VillageReach, as well as the collaboration of the mobile phone networks.

⁴⁹ [PHEOC, Monthly report on support to the coordination of the response to COVID-19 (November 2021 update), Maputo, VillageReach, 2021.]

Picture: Illustrative image of AlôVida team during work



Source: VillageReach, *Report to David Weekley Family Foundation*, Maputo, October, 2021.

AlôVida functioned mainly as a Call Centre where citizens made calls for clarification about the pandemic from COVID-19. As a mechanism to support the response and above all to disseminate information to the communities, it was functional during the pandemic. The programme recorded an increasing number of calls, rising from 300 calls in normal time to around 10,000 calls per month during the peak period of the COVID-19 pandemic⁵⁰. A major challenge was to provide health capacity building to operators. Ideally, staff with minimal health knowledge would have been hired, but since this was impossible, candidates without health knowledge were hired and given rapid trainings that were not always able to fill the gaps. Updating the software content was another challenge⁵¹. However, the process managers mentioned the good collaboration with the mobile phone operators.

Acquisition of goods and services – Almost all interviewees mentioned that the process of procurement of goods and services for the management of public health emergencies should be improved. In fact, Decree No. 5/2016 of 8 March on the procurement of goods and services does not leave many exceptions for emergency situations. In fact, the decree divides the procedures for the acquisition of goods and services into criteria of lowest price (combined criteria in some cases) and direct adjustment, which does not incorporate exceptionality with it. In contexts of public health emergencies, the situation may not be very functional. In fact, almost all of the interviewees recognised the need for flexibility in the procurement processes for goods and services in times of emergency⁵². In the context of the review of the PHEOC legal framework, aspects of procurement of goods and services for emergencies should also be reviewed. The experience of responding to the COVID-19 pandemic made use of the excellent leadership at the Ministry of Health. However, it was

⁵⁰ [VillageReach, *Report to David Weekey Family Foundation*, Maputo, October, 2021.].

⁵¹ [TC, interview, Maputo, 09, February, 2022.

⁵² Uma perspectiva administrativa também flexível seria a existência de uma base de dados dos principais fornecedores cadastrados na base de concursos o que permitiria a dispensas de concursos público na iminência da emergência. Para tal um mapeamento seria necessário para composição dos principais kits de emergência e outros materiais indispensáveis.

necessary for these aspects to be translated into the normative instruments for the functioning of PHEOC, without, of course, damaging the smoothness and transparency of the processes.

Funding sources and mobilization of funds - a mapping of potential funders for the operationalization of PHEOC is needed. At the outset, actors such as WHO, CDC, VillageReach have expressed willingness to support the MISAU in operationalizing PHEOC. However, the MISAU needs to establish a mechanism for mobilizing and providing funds to ensure the sustainability of the Operational Centre. The major challenge in depending on donor funds is their discontinuity.

In this regard, the MISAU would need to have a fund to support basic and ongoing activities of PHEOC and mobilize resources from development partners. Giving PHEOC a privileged position in the hierarchical structure of the state should also include its financial autonomy to enable it to mobilize and receive independent funds. The experience of other African countries that have given administrative and financial autonomy to PHEOC underlines its capacity to mobilize resources, including those from the private sector.

The process of mapping funding partners is foreseen in the PHEOC design plans, but at the time of finalizing data collection for this documentation, there was still no concrete map of these partners and their capacity to support the operationalization of PHEOC. One strategy that seems relevant to us is to carry out a political economy analysis of PHEOC, which would make it possible, above all, to visualize the relevance and interest of the actors in the process. The lobbying and mobilization strategy must be built on an understanding of the relevance and interest of the actors in the public health emergency. The experience of COVID-19 has shown that actors tend to engage more when they are aware of the impact of the emergency.

Transparency and accountability mechanisms – The mechanisms for mobilizing funds must also be accompanied by the design of instruments that ensure transparency and accountability of funds, thus enabling the building of trust and, consequently, the mobilization of more resources. The standards for evaluating the results must be rigorously constructed to ensure the transparency and credibility of the actions undertaken.

LESSONS ON PHEOC

- The lack of a legal framework on the design, competencies and attributions of PHEOC may have compromised its operability;
- The definition of a strategic position (anchorage) for PHEOC is an essential element for it to play its coordinating role in public health emergency preparedness and response;
- The related legislation on emergency management, such as the procurement of goods and services as well as the recruitment of human resources, is essential for public health emergency preparedness and response activities.

BEST PRACTICES ON PHEOC

- The enactment of the public health law is an opportunity to revitalize and energize PHEOC in public health emergency preparedness and response;
- Mozambique is signatory to international instruments such as the International Health Regulations of 2005 for the establishment of public health emergency preparedness and response mechanisms;

- The establishment of PHEOC, even if not fully functional, is a significant step towards the setting up of a functional public health emergency incident management system;
- The development of the strategic plan, roadmap and other tools appears as an opportunity for the activation and functionality of PHEOC;
- The experience of using ICTs in sharing information on the COVID-19 pandemic is an indicator that the use of technologies can improve the performance of PHEOC;
- The interest and involvement of government and sectoral leadership is a key element in making the regulation and activation of PHEOC more flexible;
- The experience of the collaborative approach during the pandemic response planning of COVID-19 can reinforce the building of the multisectoral approach in the design of PHEOC.

CONCLUSIONS

Mozambique is a country with a high level of vulnerability and exposure to disasters resulting in public health emergencies. Aware of this, the country is signatory to different regional and international instruments such as the SADC Protocol for health and the commitment to implement the International Health Regulations-2005. These instruments are important for improving the country's preparedness and response to public health emergencies, and there are also national legal instruments guiding the improvement of preparedness conditions to face public health emergencies. Indeed, in addition to the country's Constitution - which defines health as a right for every citizen - there are also sector policies and strategies, as well as a public health law.

Accordingly, this document has mapped the lessons learnt in the area of public health emergencies in Mozambique:

- Overall, the survey highlighted that the emergency legal framework, in its broad sense, has received attention from national public authorities. However, although the country has significant experience in responding to outbreaks and epidemics, the specification for public health emergency preparedness and response is still at an embryonic stage. There is no integrated, cross-sectoral multi-stakeholder and functional mechanism capable of addressing public health emergencies;
- The accumulated experience in public health emergency preparedness and response has been exclusively from the health sector and often without strong organization to enable better coordination. Notwithstanding the fact that the sector has created a Public Health Emergency Operational Centre in 2019, it is not yet at the stage of maturation to be able to centrally coordinate preparedness and response to public health emergencies;
- The COVID-19 pandemic emergency has however shown that when the sector prepares and uses collaborative approaches with a multitude of actors and sectors, significant results can be achieved and more catastrophic and more drastic situations avoided. However, even in this context, with a barely functional PHEOC, the approaches mobilized relied heavily on informal arrangements and, above all, on the support of senior management, with emphasis on the direct involvement of the President of the Republic and the Minister of Health;
- The approval of the Public Health Law by the Assembly of the Republic is a window of opportunity to organize the mechanisms for preparing for and responding to public health emergencies, with particular emphasis on PHEOC, although complementary legislation is still lacking;

- The status of PHEOC within the bureaucratic apparatus will be decisive for its capacity to articulate with the different sectors and actors, as well as to mobilize resources. Currently, without a legal framework that enables it to exercise its functions, it is housed in the National Directorate of Public Health and does not have the capacity to function as a central coordination platform in the preparation for and response to health emergencies. Its administrative powers are too limited to influence health domains, especially in other related sectors of the incident management system;
- A PHEOC with a level of autonomy (administratively and financially) under the direct tutelage of the Minister who oversees the health sector is seen as one of the most appropriate ways to provide coordination and information sharing capabilities in public health emergencies. However, in a first phase, and given the various limitations of the context, it should function more as a virtual platform for receiving information from intersectoral collaboration on public health emergencies. Over time, the learning of the team would enable it to become fully operational;
- For the operationalization of PHEOC, a resource mobilization plan should be made, either from the allocation of funds from the State budget or by attracting funds from development partners. At this moment, some partners have expressed interest in supporting PHEOC. For this, it is necessary to design and install not only transparency and accountability mechanisms, but also monitoring and evaluation as roadmaps for implementation. The public health emergency system should be combined with a management system to ensure trust and credibility of administrative operations.

RECOMMENDATIONS

- The documentation of lessons learnt on preparedness and response to public health emergencies in Mozambique suggests the following recommendations:
- Complement the review of the public health legal regime through the regulation of the recently approved public health law to enable the rapid operationalization of PHEOC;
- Influence the review of the complementary legislation of sectors related to the Incident Management System so that the integrated approach to public health emergencies is incorporated;
- Define, once and for all, a strategic positioning that will enable PHEOC to exercise its function of coordinating preparation and response to public health emergencies;
- Expedite the development of the PHEOC strategic plan and implementation roadmap, including the design of the SOPs of the main functions. The PHEOC operationalization tools must enable it to set targets and indicators for activities;
- Mapping and designing fund mobilization mechanisms for the operationalization of PHEOC and improving accountability and transparency mechanisms, as well as monitoring and evaluation;
- Identify and equip a physical space for the operation of PHEOC as a strategy to ensure greater dynamism;
- Design professional qualifications and recruit human resources and train them to carry out the functions defined for PHEOC.

4. ATTACHMENTS

4.1. TABLE OF INTERVIEWEES

#	Interviewee	Institution
1	Lorna Gujral	VillageReach
2	Agnaldo Guambe	VillageReach
3	Baltazar Chilundo	VillageReach
4	Arsénio Manhice	VillageReach
5	Elias El Daif	Dalberg
6	Benigna Matsinhe	MISAU
7	Natércia Matule	MISAU
8	Luísa Panguene	MISAU
9	Eduardo Samo Gudo	INS
10	Israel Gebresillassie	OMS
11	Carla Matos	MISAU
12	Peter Young	CDC
13	Jolene Nakao	CDC

4.2. INTERVIEW MATRIX

This conversation guide is only a guideline, some questions may be exceeded depending on the specificities of the interviewee.

1	What is the Experience of the health sector in managing Public Health Emergencies in Mozambique?
2	Do you think that the institutional framework is up to the demands of public health emergency?
3	What has been done in recent years to the main instruments of the health sector to respond to the emergency situation?
4	What are the structuring factors that you think are essential for public health emergency management?
5	How has the health sector organized itself to face the context of public health emergency?
6	What are (if any) management instruments mobilized to face the context of public health emergency?
7	What is being or has been done to improve public health emergency planning?
8	What would be the main plan for the proper functioning of PHEOC?
9	Do you believe that the activities being developed are adapted for effective operationalization of PHEOC?
10	What has been done that can be retained as good practices and lessons learned for the functioning of ESP response as a whole?
11	What are the main difficulties in public health incident management in Mozambique?

12	In your understanding, has the experience of managing COVID-19 improved the level of preparedness for public health emergency management?
13	What can we learn as a lesson from the experience of the COVID-19 pandemic situation?
14	What is your assessment of the management of public health emergency situation?
15	What are positive and negative aspects of public health emergency management?
16	What is in place to ensure the sustainability of PHEOC management?
17	What are the main challenges and barriers to full functioning of PHEOC?
18	How do you assess the issue of intra and inter-institutional coordination including the private sector and society on public health emergencies?

4.3. MATRIX FOR MAPPING GOOD PRACTICES AND LESSONS LEARNED IN PUBLIC HEALTH EMERGENCIES

Mapping element	Indicators/key issues (baseline analysis)	On lessons and good practices	Observations
<p>Framing and anchoring the PHEOC</p>	<ul style="list-style-type: none"> • Is there legislation or an administrative directive for the implementation of PHEOC? • Is an organizational structure of PHEOC in place? • Is the organizational role and responsibility for establishing PHEOC defined? • Are institutional arrangements for coordination defined? • Are there institutional mechanisms for disaster management and forms of funding for the operation of PHEOC? • Is there a political steering group and commitment to establish PHEOC? • Has the context of COVID-19 helped build an institutional basis for PHEOC? • In your view is there a policy guidance framework and political will on PHEOC? 	<ol style="list-style-type: none"> 1. Do you think that the institutional framework is up to meeting the demands of the public health emergency? 2. What has been done in the last for the main instruments of the health sector to respond to the emergency situation? 3. What are the structuring factors that you think are essential for public health emergency management? 	<ul style="list-style-type: none"> • What did the programme find and what did it modify and/or contribute to build in terms of the PHEOC framework? • What was the relevance in terms of the dimension of setting up institutional mechanisms that can be considered relevant and resulting from the programme? • How might the emergence of the COVID-19 pandemic have led to a strengthening in the establishment and operation of PHEOC? What was the programme's main contribution in this regard?
<p>Implementation of the Steering Committee</p>	<ul style="list-style-type: none"> • Is there a steering committee for PHEOC deployment? • Is there a clear risk assessment mechanism for PHEOC? • How is the decision-making process operationalised? • What type of effectiveness can be referenced in terms of decision-making process for PHEOC? 	<ol style="list-style-type: none"> 4. How was the health sector organized to face the context of the public health emergency? 5. What was your contribution to the management of the public 	<ul style="list-style-type: none"> • Analyse the existence of some level of operationalised, public health emergency management model. • Assess the flexibility and effectiveness of public health emergency

		health emergency in particular to the pandemic of COVID-19?	management committee to produce the intended results.
Emergency Action Plan	<ul style="list-style-type: none"> • Is there an action plan designed for PHEOC or an emergency action plan? • With INGD, has any articulation mechanism been established for conditions not existing in the MISAU? • Is a multisectoral approach to ESP planned? • Is there any clarification of the distinction of responsibilities in emergencies? • How is the PHEOC action plan mobilized or financed? • Is there a clear structure for managing the issue? 	<ol style="list-style-type: none"> 6. What are (if any) management instruments mobilised to address the context of a public health emergency? 7. What is being or has been done to improve public health emergency planning? 8. What would be the main plan for the proper functioning of PHEOC? 	<ul style="list-style-type: none"> • Here we have to understand the PHEOC operating structure as well as the multisectoral coordination for its action. • What is being done as best practices to improve multisectoral coordination? • What is being done in terms of action plan design to implement or operate PHEOC?
Functioning of PHEOC	<ul style="list-style-type: none"> • When and how to engage different actors in Public Health risk management? • Are the modalities for the functioning of the whole system defined? • How does the System function then? • What are the main actors that determine the functioning of PHEOC? • How do these elements configure the ESP response system? • What are the main interests of these actors (public authorities, partners, private sector, etc.) towards PHEOC? 	<ol style="list-style-type: none"> 9. Do you believe that the activities being developed are adapted for an effective operationalization of PHEOC? 10. What has been done that can be retained as good practices and lessons learned for the operation of the ESP response as a whole? 	<ul style="list-style-type: none"> • The central concern is to apprehend how the emergency response and public health system are defined in terms of actors? • We can seek to know about the configuration of the main actors. Their interests, mapping those favourable and unfavourable. Those that may hinder the smooth functioning. • The main object is to understand the functioning of the ESP system as a whole.

<p>Incident management system (communication, HR, training, etc.)</p>	<ul style="list-style-type: none"> • Does an incident management system exist? • Do infrastructures exist for the operationalization of PHEOC? • Are there spaces and infrastructures in place to handle ESP situations? • Is there a continuity of operations plan for PHEOC issues? • Is the issue of ICT planned? What is there? How does it work for ESP? • Does the operation of PHEOC require staff? Are there enough staff? How is it mobilised? In terms of quality does the staff respond? • Are the personnel assigned to the PHEOC exercise properly trained? Have they had routine capacity-building and training? 	<ol style="list-style-type: none"> 11. What are the main difficulties in public health incident management in Mozambique? 12. In your understanding, has the experience of managing COVID-19 improved the level of preparedness for public health emergency management? 13. What can we learn as a lesson from the experience of the COVID-19 pandemic situation? 	<ul style="list-style-type: none"> • What the programme has done for the functioning of the public health incident management system. • The main objective here is to understand the set-up of the system comprising the infrastructure, ICT as well as HR. • Seek to understand the main innovations or practices resulting from the implementation of the project. • It is a matter here of apprehending the organizational dimension of supporting the PHAs.
<p>Monitoring and evaluation activities</p>	<ul style="list-style-type: none"> • Is there an integrated monitoring plan to evaluate PHEOC's activities and operationalization? 	<ol style="list-style-type: none"> 14. What is your assessment of the management of public health emergency situations? 15. What are positive and negative aspects of the management of public health emergency? 	<ul style="list-style-type: none"> • Understand the exercise built to establish a process monitoring mechanism
<p>PHEOC operationalization cost</p>	<ul style="list-style-type: none"> • What are the main challenges in terms of ESP operating costs? 	<ol style="list-style-type: none"> 16. What is in place to ensure the sustainability of PHEOC management? 17. What are the main challenges and barriers to full operation of PHEOC? 	<ul style="list-style-type: none"> • What has been done in terms of current cost support? What kind of investments. • Apprehend the efforts made and the limitations.

