Monitoring and Evaluation for Effective Management of Zoonotic Diseases

An operational tool of the Tripartite Zoonoses Guide

Food and Agriculture Organization of the United Nations

World Health Organization

World Organisation for Animal Health

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Published by

The Food and Agriculture Organization of the United Nations

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The World Health Organization

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The World Organisation for Animal Health

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2024

Food and Agriculture Organization of the United Nations

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Required citation:
FAO, WHO & WOAH. 2024. *Monitoring and evaluation for effective management of zoonotic diseases – An operational tool of the Tripartite Zoonoses Guide.* Rome. https://doi.org/10.4060/cd3642en

ISBN 978-92-5-139442-7 (FAO)
ISBN 978-92-4-010400-6 (WHO electronic version)
ISBN 978-92-4-010401-3 (WHO print version)

Acknowledgements

This document was developed by the Food and Agriculture Organization of the United Nations (FAO), the World Organisation for Animal Health (WOAH) and the World Health Organization (WHO), including their regional and country offices, and in close collaboration with subject matter experts from around the world listed in in the Contributors section. We gratefully acknowledge the time and effort invested by these experts working in their individual and institutional capacities. We also thank the Defense Threat Reduction Agency (DTRA) of the United States of America for funding and supporting the development of this guide.

Contents

Supplemetary documents

M&E OT Workbook is available at https://www.fao.org/3/CD3642EN/ME-OT_Workbook_EN.xlsx

Data Collection Tool is available at https://www.fao.org/3/CD3642EN/ME-OT_Data-Collection-Tool_EN.xlsx

Acronyms

AMR	Antimicrobial resistance
CIR OT	Coordinated Investigation and Response Operational Tool
FAO	Food and Agriculture Organization of the United Nations
IHR	International health regulations
JEE	Joint external evaluation
JRA	Joint risk assessment
JRA OT	Joint Risk Assessment Operational Tool
MCM	Multisectoral Coordination Mechanism
MCM OT	Multisectoral Coordination Mechanisms Operational Tool
MoU	Memorandum of understanding
M&E	Monitoring and evaluation
M&E OT	Monitoring and Evaluation Operational Tool
OT	Operational tool
OH JPA	One Health Joint Plan of Action
PPE	Personal protective equipment
SIS	Surveillance and information sharing
SIS OT	Surveillance and Information Sharing Operational Tool
SOP	Standard operational procedures
SPAR	State Party Self-Assessment Annual Reporting
SWOT	Strengths, weakness, opportunities and threats
TZG	Tripartite Zoonoses Guide
TWG	Technical Working Group
WFD	Workforce development
WFD OT	Workforce Development Operational Tool
WHO	World Health Organization
WOAH	World Organisation for Animal Health

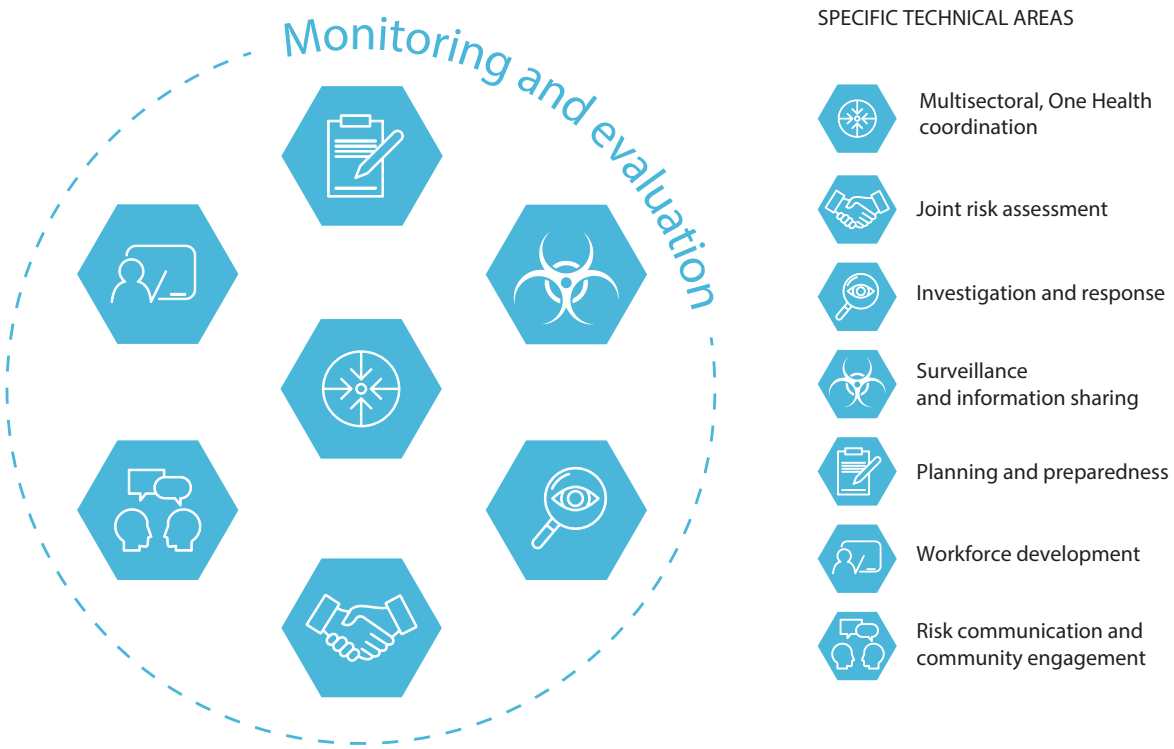
The M&E OT in the context of the Tripartite Zoonoses Guide

In 2019, the Food and Agriculture Organization of the United Nations (FAO), the World Health Organization (WHO) and the World Organisation for Animal Health (WOAH) developed the Tripartite Zoonoses Guide (TZG) (WHO, FAO and WOAH, 2019). It was the culmination of a global effort involving more than 100 experts worldwide to provide guidance and explain best practices for addressing zoonotic diseases in countries. This includes supporting countries in understanding national contexts and developing capacities for strategic technical areas. Operational tools (OTs) have been developed to support national staff according to each technical area of the TZG shown in Figure 1: (1) the Multisectoral Coordination Mechanisms OT (MCM OT) (WHO, FAO, WOAH, 2022), (2) the Joint Risk Assessment OT (JRA OT) (FAO, WHO and WOAH, 2020), (3) the Surveillance and Information Sharing OT (SIS OT) (WHO, FAO, WOAH, 2022), (4) the Workforce Development OT (WFD OT), (5) the Coordinated Investigation and Response OT (CIR OT) and (6) the Monitoring and Evaluation OT (M&E OT). These tools can be used independently or in coordinated efforts to support national and subnational capacity for zoonotic disease management, ultimately linking to existing regional and/or international policies and frameworks and supporting efforts for global health security. Specifically, the M&E OT provides additional support in the area of monitoring and evaluation to countries implementing the TZG.

The development of the M&E OT was guided by the Technical Working Group (TWG), which included representatives from the following organizations: FAO; WHO; WOAH; Instituto Superiore di Sanità; Johns Hopkins University Applied Physics Laboratory; Resolve to Save Lives; the Centers for Disease Control and Prevention of the United States of America; the UK Health Security Agency; University of Oxford; and the University of Minnesota. TWG members participated solely as representatives of their respective organizations.

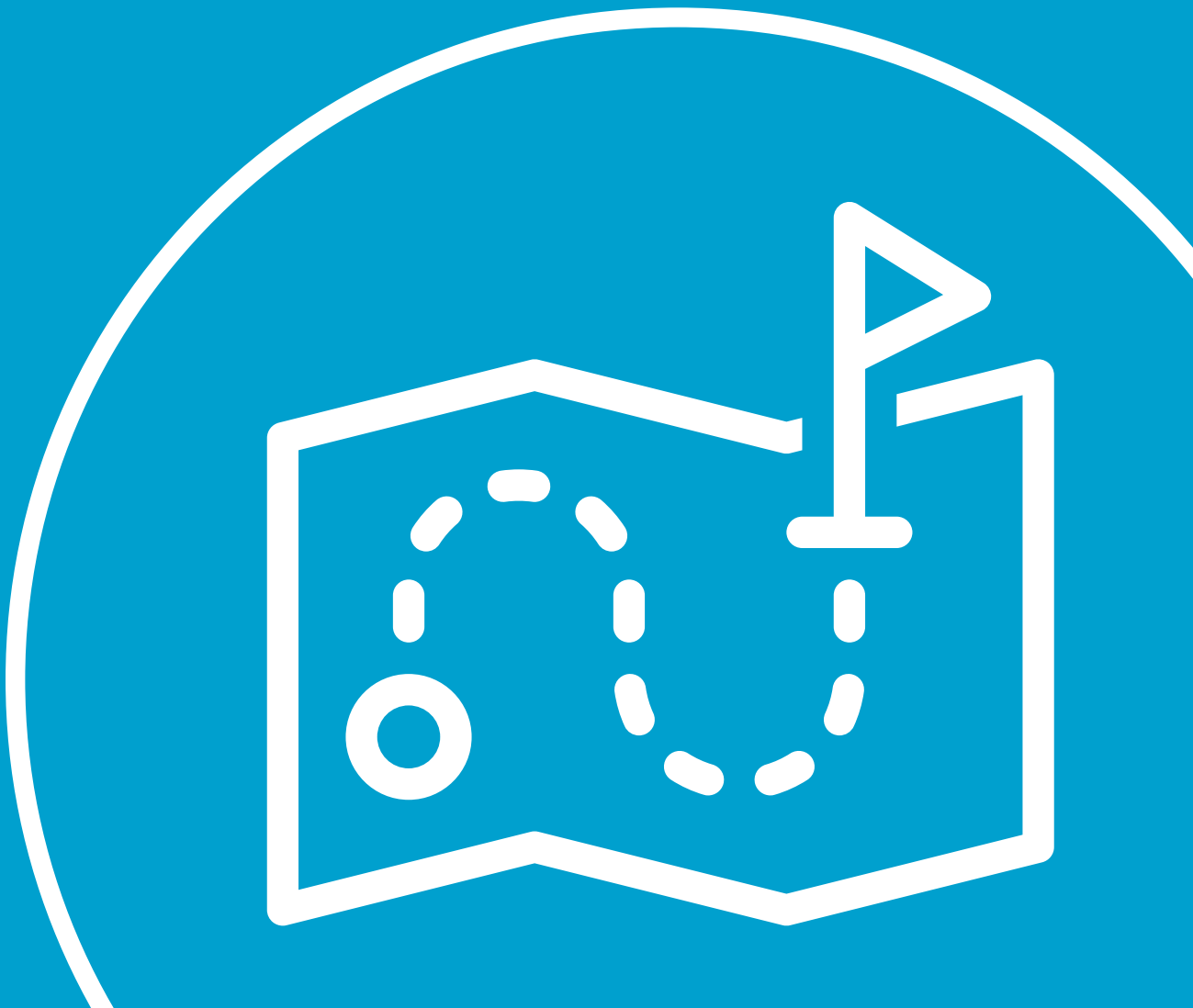
The process of tool development was led by FAO, which involved regular online consultations and one in-person meeting with the TWG. The TWG contributed significantly to defining the scope, conceptual approach, and overall technical content of the tool.

Figure 1. M&E OT in the context of the Tripartite Zoonoses Guide



Source: Author's own elaboration.

What is the M&E OT?



Background

Zoonotic infectious diseases that can be spread between animals and humans are the leading cause of emerging infectious diseases and recent pandemics. They can cause significant harm to human and animal health, as they can rapidly spread with devastating consequences.

The One Health approach acknowledges the interconnectedness of the health of humans, domestic and wild animals, plants and the wider environment, including ecosystems. This approach advocates for the integration of expertise from various fields and promotes interdisciplinary collaboration to address zoonotic disease threats effectively. Consequently, managing zoonotic diseases necessitates coordinated efforts from multiple sectors and disciplines, such as health, agriculture, the environment, wildlife conservation and policymaking. Sharing information, expertise and resources between these sectors is critical for early detection, rapid response, control and effective prevention strategies.

To ensure comprehensive involvement and cooperation across all relevant sectors in zoonotic disease management, multisectoral programmes, frameworks and plans adopting a One Health approach are essential. They coordinate sectoral collaboration, establish common purposes and objectives, and define multisectoral activities.

Monitoring and evaluation (M&E) is a systematic process essential for determining whether these frameworks, plans, programmes, or projects and their activities achieve the intended objectives and results.

Concepts and definitions of monitoring and evaluation

To build One Health M&E for zoonotic disease-related programmes, it is important to understand the foundational theories and practical applications of M&E. These concepts guide the stepwise process outlined in the M&E OT. The M&E OT complements the Tripartite Zoonoses Guide (TZG), specifically Chapter 6 of the TZG: Monitoring and evaluating the implementation of the TZG in countries.

Definitions from the TZG:

Monitoring is a continuous and systematic process of collecting, analysing and using information to guide activities toward their intended objectives. It provides timely information about whether an activity, programme or policy is being implemented as planned and allows for corrections to be made.

Evaluation is an assessment of the effectiveness, efficiency, relevance, or impact of a programme or set of activities to determine whether the initiative has achieved its objectives.

- In the context of the M&E OT, monitoring would be routinely performed on One Health-related activities to support and meet those specific objectives and evaluation would be focused on determining the impact of multi-sectoral and One Health-related programmes and interventions.

M&E is a continuous management function to assess progress towards achieving expected results, identify bottlenecks in implementation, and highlight the impacts of a plan, programme or project and its activities.

M&E usually involves the following key components:

- **Result (M&E) or logical frameworks** organize expected results into result levels (e.g. outputs, outcomes and impact), measured by specific indicators;
- **Indicators** measure the progress towards achieving desired results from the framework at different levels; and
- **M&E plans** outline the functions and processes needed to gather relevant data on indicators, including methods and tools required.

> Best practice: M&E components should be developed with all key stakeholders to ensure participation and ownership of a programme/project/plan.

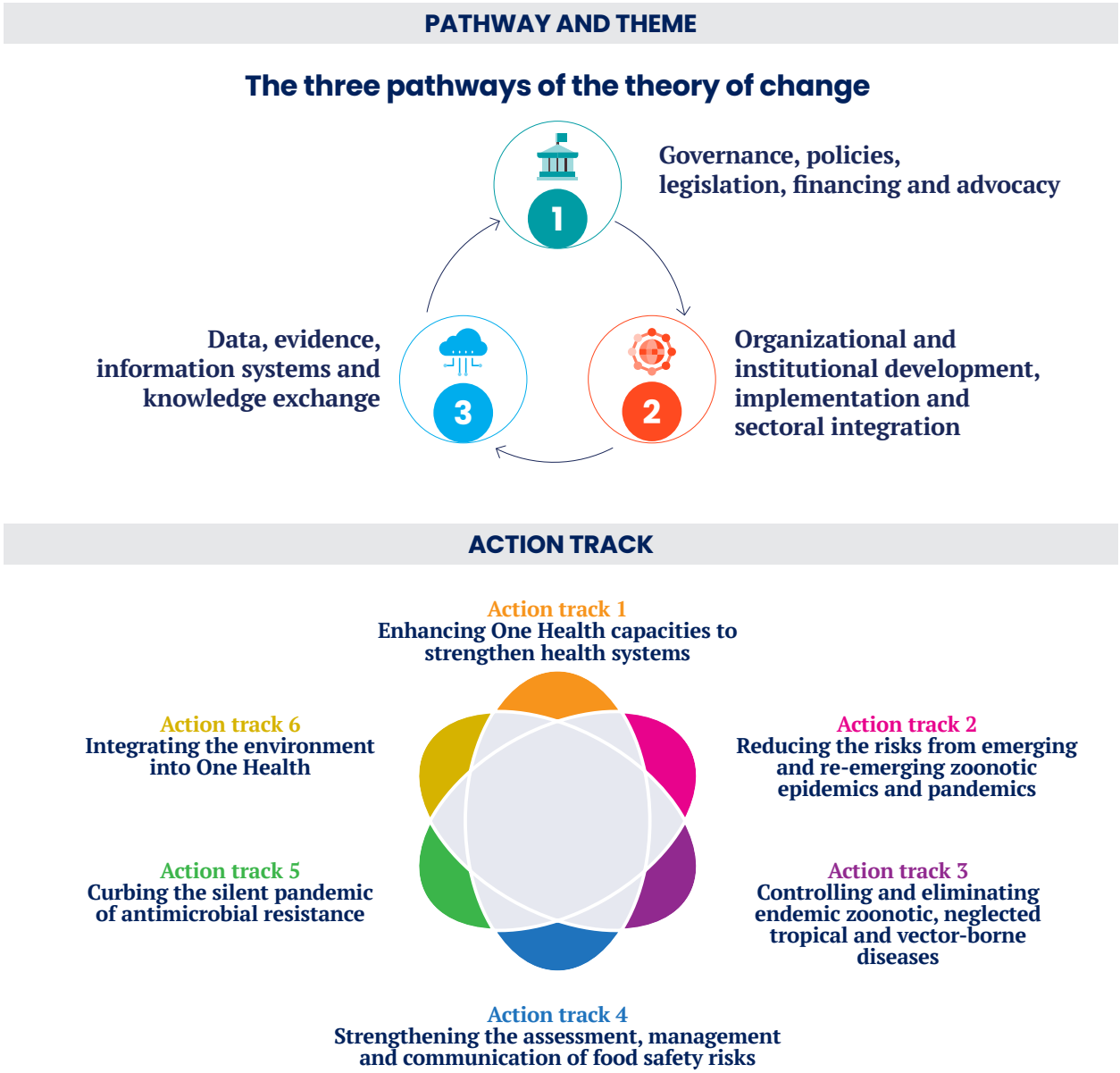
M&E is vital for identifying the impact of activities on their intended goals by assessing long-term effects, which aids future planning.

M&E is an essential practice of any development initiative, including improved use of the One Health approach to manage zoonotic diseases. However, many countries face challenges in operationalizing multi-actor M&E due to limited experience, skills or resources. Moreover, there is no existing guidance currently on the implementation of coordinated M&E for zoonotic disease programmes at the national level. The M&E OT aims to address these gaps by providing guidance and tools for implementing coordinated M&E in countries implementing the TZG.

Alignment with the One Health Joint Plan of Action

The M&E OT is aligned with the Quadripartite One Health Joint Plan of Action (OH JPA) (FAO, UNEP, WHO and WOAH, 2022) and its associated national-level implementation guide (WHO, FAO, UNEP and WOAH, 2023). The M&E OT can be used by countries to operationalize OH JPA's pathway 3 in the use of knowledge and evidence in decisions on strategic and technical One Health actions and for measuring their effectiveness, specifically to manage zoonotic diseases, and may be adapted to address other One Health priority areas. The M&E OT can also be used to implement the OH JPA, particularly Action track 1 for enhancing One Health capacities to strengthen health systems; Action track 2 on reducing the risks from emerging and re-emerging zoonotic epidemics and pandemics; and Action track 3 on controlling and eliminating endemic zoonotic, neglected tropical and vector-borne diseases.

Figure 2. The pathways of the theory of change and action tracks of the Quadripartite One Health Joint Plan of Action.



Source: FAO, UNEP, WHO and WOAH, 2022.

Introduction

The M&E OT supports countries in their efforts to establish and strengthen monitoring and evaluation practices for coordinated, multisectoral, One Health zoonotic disease-related activities and programmes, following the guidance provided in the TZG.

While the focus is on zoonotic diseases, this tool may be adapted for other health threats at the human–animal–environment interface, such as food safety and antimicrobial resistance, which also require a multisectoral, One Health approach.

The M&E OT provides a framework for M&E in alignment with the TZG and its operational tools, offering foundational guidance for developing and implementing country-specific coordinated M&E processes. It focuses on multisectoral coordinated or joint activities, and emphasizes the importance of defining measurable results, collecting relevant information and data, and using the insights for planning and continuous improvement of multisectoral programmes addressing zoonotic diseases.

Overview

Purpose and objectives of the M&E OT

The purpose of the M&E OT is to provide a TZG-aligned operational tool for developing and strengthening the monitoring and evaluation processes for multisectoral coordinated zoonotic disease activities, utilizing a One Health approach.

The M&E OT provides a stepwise approach for national authorities (via existing Multisectoral Coordination Mechanisms [MCM] or key One Health representatives) to monitor and evaluate multisectoral coordinated activities for zoonotic disease prevention, preparedness, response and control. This tool helps countries collect and report relevant data, track programme and activity progress, and implement principles and best practices highlighted in the TZG and its operational tools.

Specifically, the M&E OT:

- Provides an M&E guidance, framework, indicators library, data collection and M&E plan templates to facilitate the development of country-specific M&E processes for national strategies and programmes.

Expected outcomes

After completing the M&E OT, countries will have:

1. Enhanced knowledge and capacity to establish country-specific M&E processes;
2. A customized M&E framework and a list of country-specific indicators;
3. Templates for further planning and data collection; and
4. Implementation roadmap on subsequent steps for country-specific M&E processes.

How to use the M&E OT

The M&E OT is designed to support an MCM, such as a One Health platform, or similar multisectoral groups, and key government representatives responsible for managing, coordinating and evaluating coordinated multisectoral zoonotic disease activities. Prior experience with M&E is not required for utilizing this tool.

The M&E OT provides the flexibility to modify and adapt its components to fit any national context. For instance, it can be used to shape the development of the monitoring and evaluation frameworks for existing zoonotic disease programmes and plans, to address M&E capacity gaps, or applied for monitoring the implementation of plans and recommendations from other tools, particularly TZG operational tools. Although this tool follows a stepwise methodology, it allows countries to utilize the resources independently or collectively, based on their specific M&E needs.

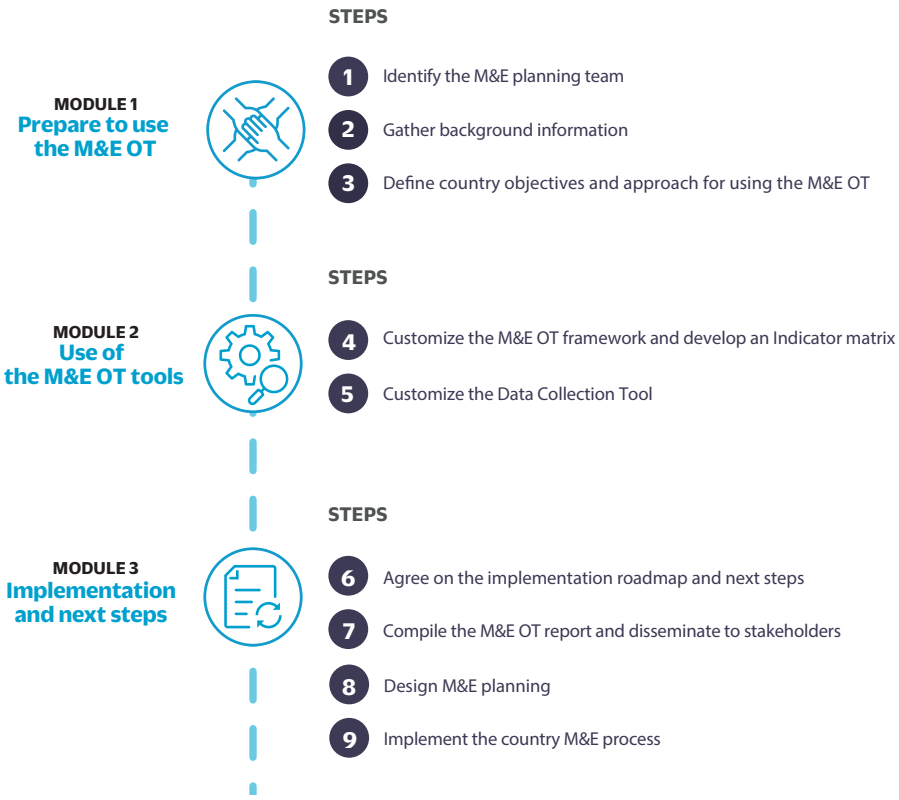
M&E is an iterative and flexible process that guides activity planning and implementation, and it is recommended to be incorporated into routine practices. Continuous monitoring enables countries to assess and improve their activities and track progress toward meeting an intended goal. Periodic evaluation helps determine the overall impact of the programme. The key concept of this tool is to tailor the M&E OT framework to the country's context, priorities and needs, develop indicators and data collection forms and ultimately use these resources to establish or enhance M&E processes. The tool and its resources can be reused as needed based on changes in activities, practices and lessons learned.

Structure of the M&E OT

The M&E OT process is divided into three modules, comprising a total of nine steps (Figure 3):

- Module 1 (Steps 1 to 3) focuses on the preparation for using the tool.
- Module 2 (Steps 4 to 5) supports the development of the M&E framework, indicators and indicators matrix and the utilization of the Data Collection Tool
- Module 3 (Steps 6 to 9) guides on the next steps to utilize the M&E OT outcomes to implement country-specific M&E processes.

Figure 3: M&E OT structure



Source: Author's own elaboration.

Materials of the M&E OT

- This **document** describes the whole M&E OT process, step by step, including annexes to facilitate understanding and use of the tool:
  - Annex A: Template terms of reference for the M&E planning team
  - Annex B: Draft three-day workshop agenda
  - Annex C: M&E OT framework
  - Annex D: Library of indicators
  - Annex E: Indicator matrix
  - Annex F: M&E OT workshop report template
  - Annex G: M&E plan template

- The **M&E OT workbook**: serves as the core instrument of the M&E OT, providing a comprehensive and stepwise approach to developing the M&E framework, indicators and an Indicator matrix. This Microsoft Excel-based tool guides users through various stages, including information gathering, determining the approach and objectives for using the M&E OT, reviewing the M&E OT framework and Library of indicators, selecting technical areas, customizing the M&E OT framework and developing country indicators accordingly. It also aids in finalizing the Indicator matrix, articulating what each indicator will measure, its measurement frequency, the data source, the data collection method and responsible individuals or institutions for data collection and analysis. With its user-friendly interface and structured guidance, the M&E OT workbook streamlines the process of designing and implementing robust monitoring and evaluation processes for zoonotic disease programmes.

  The M&E OT Workbook is available at: https://www.fao.org/3/CD3642EN/ME-OT_Workbook_EN.xlsx

- The **Data Collection Tool**, also a Microsoft Excel-based tool, supports the development of data collection forms, tables, and indicator tracking specifically designed for country application and use. With its pre-designed indicator data collection templates based on the Library of indicators, this tool allows countries to easily customize and adapt them to their unique indicators and requirements. By utilizing the Data Collection Tool, countries can identify their data collection needs and periodically gather indicator data through designated personnel or agencies using the provided indicator worksheets (reporting forms). It offers flexibility and can be used directly for data collection or integrated into existing data collection tools and systems. The Data Collection Tool empowers countries to create their own data collection and indicator tracking mechanisms aligned with their finalized list of indicators.

  The Data Collection Tool is available at: https://www.fao.org/3/CD3642EN/ME-OT_Data-Collection-Tool_EN.xlsx

Getting started

Read this first, as it contains important principles to be aware of before using the M&E OT

- The M&E OT applies to all countries and for all levels of M&E capacity;
- Use of the tool may require several in-person or online meetings or workshop sessions;
- The success of this process is based on joint discussions, consensus finding and shared decision-making among all relevant sectors; and
- Use of the M&E OT is adaptable to each country's context.

Module 1

Prepare to use the MCM OT

M&E OT tools for Module 1:

- **M&E OT workbook**

Step 1: **Identify the M&E planning team**

All relevant stakeholders (e.g. MCM, sectors, agencies and ministries) responsible for multisectoral, One Health management, coordination, implementation and M&E of zoonotic disease activities in the country should be identified first to form the M&E planning team representation. The M&E planning team is responsible for the technical preparation and implementation of the M&E OT. They will also be responsible for coordinating and overseeing the follow-up steps on country-specific M&E processes.

☆ Best practice

In cases where an established MCM (One Health Platform or similar group) already exists, it could be the MCM's responsibility to form the M&E planning team. In scenarios where an MCM has not been established, a distributed leadership strategy can be employed. This approach allows One Health-related sectors to cooperate to designate team members from their specific ministries or agencies. It also supports an effective formation of the M&E planning team, irrespective of the existence of a formal MCM.

Consideration should be made to ensure representation from all key stakeholders within the team where feasible. Furthermore, there should be a designated planning team lead, ideally chosen from M&E experts or officers.

☆ Best practice

It is recommended to appoint an existing M&E officer from the MCM (One Health Platform, or a similar group) as the planning team lead. If this is not feasible, officially appoint a dedicated M&E officer to fulfil this role if possible.

The full extent of the responsibilities of the M&E planning team and the planning team lead are described in the terms of reference template for the M&E planning team (Annex A).

Overall, the M&E planning team should consist of:

1. M&E experts or dedicated personnel responsible for implementing M&E for the MCM and/or relevant sectors;
2. Staff responsible for MCM or One Health planning and implementation;

3. Staff from relevant sectors with expertise, experience and information on zoonotic disease programmes, including technical experts, leaders and individuals with programme management, implementation and M&E experience; and
4. Representatives from the technical working groups for zoonotic diseases.

Instructions:

- Identify national stakeholders responsible for the management, coordination, implementation and M&E of zoonotic disease-related activities;
- Appoint members of the M&E planning team who represent the identified stakeholders and confirm their willingness and ability to participate fully;
- Designate a planning team lead; and
- List the members of the M&E planning team and the focal point in the M&E planning team table (M&E OT workbook).
  - *Source:* M&E OT workbook ("M&E planning team" tab)

Step 1

Supporting annexes

- Terms of reference for the M&E planning team (Annex A)

Step 2: **Gather background information**

To optimize the use of the M&E OT, the planning team should begin by gathering background information and incorporating inputs from all relevant sectors. This step enables the M&E planning team to achieve the following:

- Identify existing coordinated M&E processes, resources and objectives for zoonotic disease and other One Health-related programmes;
- Determine stakeholders involved or to be included in coordinated M&E processes for zoonotic disease and other One Health-related programmes;
- If applicable, identify existing M&E processes along with their supporting documentation and resources; and
- Identify zoonotic disease and other One Health-related programmes, strategies and plans that need M&E.

Instructions:

- Collect requested information and complete the Information gathering table (M&E OT workbook).
  - *Source:* M&E OT workbook ("Information gathering" tab)

Step 3: **Define country objectives and approach for using the M&E OT**

This step allows the M&E planning team to identify M&E gaps and needs for the existing collaborative zoonotic disease activities to address these and optimize the use of the M&E OT.

Finally, the team decides which country's zoonotic disease and other One Health-related strategies, frameworks and plans the M&E OT will support (if applicable) and establishes the country's objectives and approach for M&E OT use. This step informs the steps and processes of Module 2.

This step enables the M&E planning team to complete the following:

- Identify M&E gaps and needs;
- Identify strategies, frameworks and plans that the M&E OT will support ; and
- Define the objectives and approach for using the M&E OT.

Instructions:

- Discuss and agree on the objectives and approach of using the M&E OT.
- Complete the Country objectives and approach table (M&E OT workbook).
  - *Source:* M&E OT workbook ("Country objectives and approach" tab)

Module 2

Use of the M&E OT tools

M&E OT tools for Module 2:

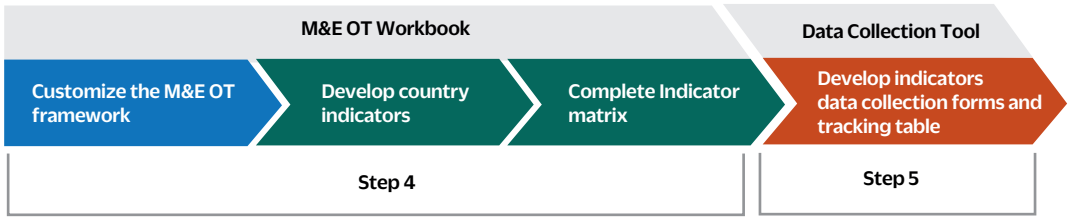
- M&E OT workbook
- Data Collection Tool

In Module 2, the M&E planning team convenes, either through a workshop or a series of online or in-person meetings. During these meetings, the team utilizes the relevant information that was gathered, agreed upon and validated during the preparatory steps in Module 1, as outlined in the "Information gathering" and "Country objectives and approach" sections of the M&E OT workbook.

A draft workshop agenda (Annex B) is available to help in structuring a proposed three-day workshop in case this format is selected for utilizing the M&E OT.

Module 2 outlines the pathway of using the M&E OT tools, as illustrated in Figure 4.

Figure 4. The pathway of the M&E OT tools use



Source: Author's own elaboration.

Step 4: **Customize the M&E OT framework and develop an Indicator matrix**

In this step, the M&E planning team is tasked with customizing the M&E OT framework (Annex C), formulating country-specific indicators, and completing an indicators matrix.

Step 4.1. **Customize the M&E OT framework**

As part of this step, the M&E OT framework (Annex C) is customized to align with the unique national needs and priorities. This is a crucial step to ensure effective monitoring and evaluation tailored to country-specific contexts.

Instructions

- Review the M&E OT framework and select the technical areas of interest for M&E based on identified national-level frameworks, strategies and plans.
  - *Source:* M&E OT framework (Annex C and M&E OT workbook ("M&E OT Framework" tab).
- Customize the M&E OT framework based on country documentation and the selected areas. Make necessary changes to the framework's outcome and output levels to ensure that they reflect the country's specific needs and goals. Revise the impact to fit it into the national long-term goals.
  - *Source:* M&E OT workbook ("Technical areas" tabs, "Impact" tab).

Note: When reviewing and customizing the framework, refer to the country's background information (Module 1, Step 2) and the agreed-upon objectives (Module 1, Step 3). This information was previously completed in the M&E OT workbook under the "Information gathering" and "Country objectives and approach" tabs.

Step 4.2. **Develop indicators**

After completing the M&E OT framework customization process, the Library of indicators is reviewed to identify indicators that apply to the customized framework. These identified indicators are then adapted to become country-specific indicators. Also, new indicators may need to be created in case the indicators from the library do not cover a specific need of the country's customized framework. A description of the different types of indicators included in the Library of indicators can be found in Annex D.

Note: The Library of indicators follows an indicator reference sheet format which is explained in Annex D. This library is not an exhaustive list of indicators nor the only indicators that are needed to measure programme performance and impact - these are simply examples of indicators to be used as a starting point to measure expected outputs, outcomes and impact of multisectoral, collaborative zoonotic disease programmes following TZG principles.

Instructions

- Review the Library of indicators to identify those that best match the customized framework and the specific result levels (output, outcome and impact).
  - *Source:* Library of indicators (Annex D) and M&E OT workbook ("Library of indicators" tab).
- Adjust the chosen indicators to become country-specific or, if needed, create new indicators in alignment with the country-specific outputs, outcomes and impact.
  - *Source:* M&E OT workbook ("Technical areas" tabs, "Impact" tab).

☆ Best practice

In case a completely new indicator not represented in the Library of indicators is developed; it is recommended to complete the reference sheet for this indicator using Annex D: **Library of indicators**.

Tips for completing Step 4.2

- Given that many indicators can be difficult to manage or are unnecessary, it is recommended to only develop a manageable number of indicators. Indicators can be prioritized based on their related results and the objectives of the programme.
- It is suggested to adapt and contextualize the indicator reference sheets from the library according to the country indicators to adjust the indicator details and fit the country's context.
- Make sure to select indicators that are realistic and feasible to track and achieve given the country context, its data sources, capacity and resources (including budget) available for the M&E.

Step 4.3. **Complete the Indicator matrix**

After finalizing the development of the country indicators, the next step is to complete the Indicator matrix (Annex E). The Indicator matrix is a structured planning resource used in M&E processes. It offers a comprehensive overview of indicators developed for planning and streamlining data tracking and progress measurement. Given the context, the following are the key features and purposes of the Indicator matrix:

1. Detailed description of indicators: each indicator within the matrix provides insights into what it aims to measure. This ensures clarity and specificity in understanding the parameters and focus of each metric, such as its relevance to the results derived from the customized framework.
2. Supplementary indicator details such as:
   - Baseline and target values: establishing a starting point (baseline) and a desired endpoint (target) for each indicator helps in tracking progress and determining the success of interventions.
   - Reporting frequency: how often the data for each indicator needs to be reported ensures regular monitoring, tracking and timely interventions.
   - Means of verification: the methods or sources by which the reported data can be verified to ensure data authenticity and reliability.
3. Measurement methodology: the matrix specifies how each indicator will be measured and/or quantified, ensuring consistency in data collection and interpretation.
4. Data source identification: by pinpointing where the data for each indicator will come from (e.g. institution, group, person and/or document), the matrix facilitates feasible and efficient data gathering, reducing potential redundancies or confusion about data origins.
5. Data collection techniques: the matrix also describes the method or approach to be used to collect the relevant data for each indicator, optimizing the quality, consistency and relevance of the gathered information.
6. Responsibility allocation: by indicating who oversees collecting and analysing each indicator's data, including identifying the focal points responsible for coordination across sectors and data collection. The matrix ensures accountability across sectors, timely data gathering and analysis.

Instructions

- Incorporate all finalized country indicators for the chosen technical areas and impact indicators into the "Indicator matrix" table.
  - *Source:* M&E OT workbook ("Technical areas" tabs; "Indicator matrix" tab).
- Fill out the Indicator matrix comprehensively for every listed indicator.
  - *Source:* M&E OT workbook ("Indicator matrix" tab).

Step 4

Supporting annexes

- M&E OT framework (Annex C)
- Library of indicators (Annex D)

Step 5: **Customize the Data Collection Tool**

The Data Collection Tool is an instrument designed to assist in gathering data related to the country indicators. This tool contains pre-designed indicator data collection templates for the indicator sources from the library. In this step, these templates are meant to be customized and adapted to record data specific to the country indicators.

Countries have the flexibility to either use this tool directly for data collection or integrate its forms into their pre-existing data collection tools and systems.

Instructions:

- Review the completed Indicator matrix and identify the library code corresponding to the indicators used for the development of the country indicators.
  - *Source:* M&E OT workbook ("Indicator matrix" tab).
- Consult the reference sheets in the library, according to the library codes corresponding to the indicators used for the development of the country indicators.
  - *Source:* Library of indicators (Annex D).
- Customize data collection templates to align with the country indicators summarized in the Indicator matrix. In the Data Collection Tool, locate the worksheet for the indicators that have been customized or that resemble the country indicator using the identified library indicator code. Modify the data collection table in the located worksheet to suit the country indicator based on the country's specific requirements and situation.
  - *Source:* Data Collection Tool.

Note: The Data Collection Tool includes an **"Indicator tracking table"**. This template provides a comprehensive overview of a country indicators' information, such as actual values and targets set within a defined timeframe. This table facilitates indicator data comparisons, tracking of progress, and evaluation of the effectiveness and impact of a programme overall.
Countries should utilize this table only after collecting and analysing the relevant indicators data (refer to **Module 3, Step 9.2**).

Step 5

Supporting annexes

- Library of indicators (Annex D)

Module 3

Implementation and next steps

M&E OT tools for Module 3:

- M&E OT workbook
- Data Collection Tool

This module offers general guidance on agreeing on subsequent steps and delineates how the M&E OT outcomes can be utilized to implement the country-specific M&E processes.

Step 6: **Agree on implementation roadmap and next steps**

In this step, the M&E planning team discusses and agrees on the subsequent actions and their respective implementation timeframes. This is based on the outcomes from the utilization of the M&E OT as well as the country's objectives and plans to either develop or strengthen national M&E processes. For instance, the forthcoming actions might include finalizing the national framework and indicators development, and the creation of an M&E plan, or, if it already exists, integrating the M&E OT results into it. The follow-up actions are documented in the country's implementation roadmap, located in the M&E OT workbook and require the endorsement of all participants. It is important to ensure that resources to implement the roadmap are available or can be mobilized.

Instructions:

- Discuss and record the implementation roadmap. For guidance, refer to the examples of actions provided in the "Implementation roadmap" tab of the M&E OT workbook.
  - *Source:* M&E OT workbook ("Implementation roadmap" tab).

Step 7: **Compile the M&E OT workshop report and disseminate to stakeholders**

The report serves as a detailed record, capturing the discussions held, materials developed and decisions made during the M&E OT workshop.

Subsequently, the M&E planning team is tasked with disseminating the report to the relevant decision-makers, policymakers and stakeholders, such as those from the MCM or key One Health representatives and committees. The objective of this process is multifaceted, aiming to make use of the M&E OT results to:

- Mobilize resources by advocating with partners, thereby supporting subsequent phases of the national M&E process;
- Enhance understanding and ownership of the M&E process, facilitating more inclusive and informed participation; and
- Solicit validation of the M&E OT process results, including materials developed and incorporating feedback received, ensuring their relevance and efficacy.

Instructions

- Use the workshop report template to elaborate on the report.
  - *Source:* M&E OT workshop report template (Annex F).
- Disseminate the report to the relevant stakeholders and decision-makers

Step 7

Supporting annexes

M&E OT workshop report template (Annex F)

Step 8: **Plan M&E**

The utilization of the M&E OT, including the development of the technical resources, such as customized M&E framework, Indicator matrix and data collection forms serves as the baseline for the implementation of an M&E process tailored to the country's unique context and structure.

However, to fully establish or enhance an M&E process, the following additional steps are recommended for implementation.

Step 8.1 **Develop an M&E plan**

An M&E plan is a comprehensive document that outlines how the results of the programme will be measured and assessed to inform more effective decision-making and future planning.

This involves:

- The framework and specific indicators to measure routinely and periodically.
- The process for data collection, analysis and evaluation.
- M&E responsibilities.
- The data flow within the organization.
- The resources required for implementing an M&E process.

The purpose of an M&E plan is to provide a structured approach for the M&E process to ensure the programme is achieving its goals, using resources efficiently and generating desired results. Additionally, it aids stakeholders in identifying areas for improvement or further investment and provides valuable insights into how a programme is impacting its target audience and adding value to management strategy. An effective M&E plan is an asset in the overall success of any programme or initiative.

A Template for an M&E plan is provided in Annex G.

Instructions

- Develop an M&E plan by describing country-specific M&E processes and integrating M&E OT outcomes.
  - *Source:* M&E plan template (Annex G)

Note: If a country already has a formalized M&E plan, they have the option to utilize the M&E OT materials and outcomes to revise, contribute and address any deficiencies in their M&E plan.

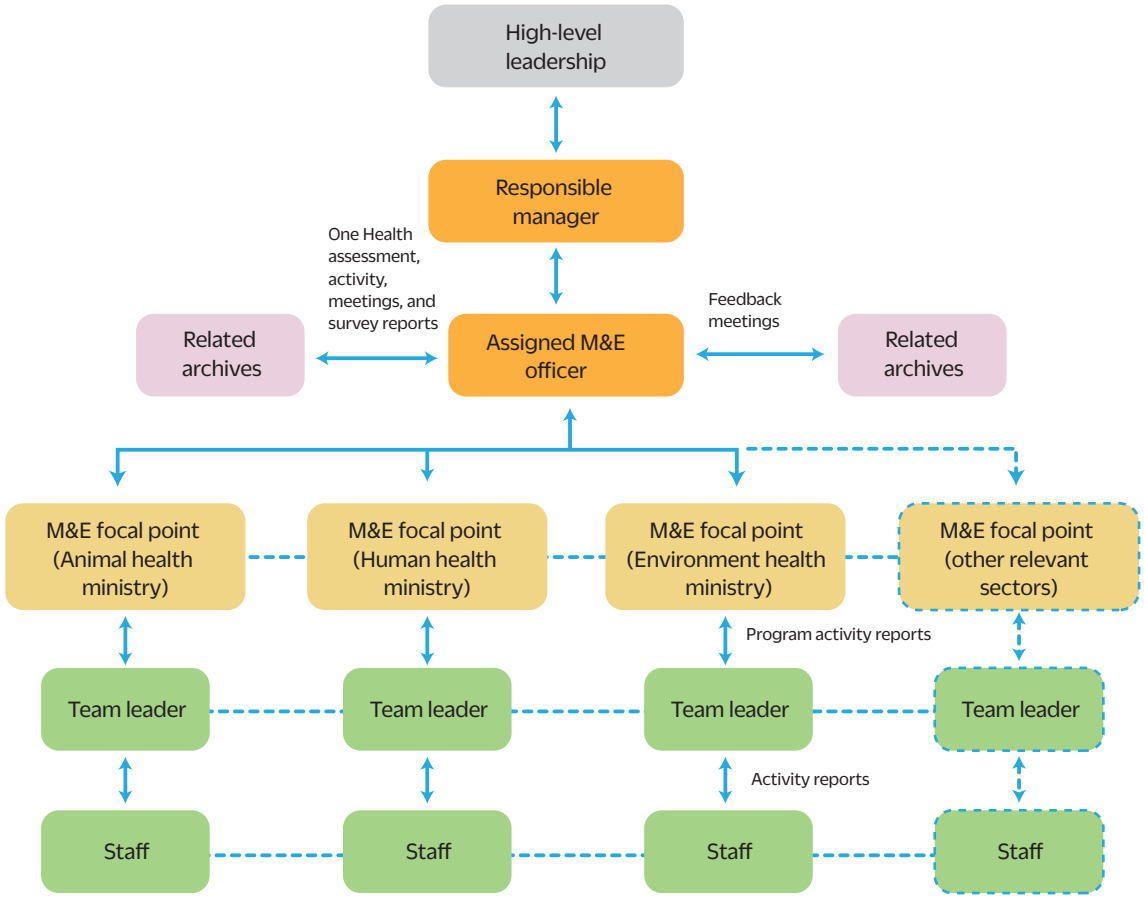
Step 8.2 **Establish data flow**

Establishing a data flow is crucial as it delineates and visualizes the movement of data from the initial collection point, progressing through the management team, and ultimately reaching various stakeholders. It facilitates a structured and formalized M&E process cycle, ensuring comprehensive involvement and assigned responsibility among relevant stakeholders. Consequently, this structure connects the flow of information and data reporting with the interpretation and management of results, data sharing, and decision-making by policymakers.

For effective implementation of the One Health approach, it is recommended to designate M&E focal points within each relevant ministry or institution involved in the coordinated M&E process. These focal points do not need to be M&E experts; their responsibility is to collect information within each sector according to the M&E plan. They will be instrumental in facilitating coherent and efficient information and data collection from the responsible staff within their sector. The M&E officer of the One Health Platform or designated personnel plays a central role in receiving and managing the data collected from the M&E focal points, epitomizing a harmonized data flow. This coordinated approach to data flow and focal point allocation is illustrated in the flowchart below (Figure 5), offering a visual representation of the structured information and data exchange process.

The data flow should be reflected in the national M&E plan.

Figure 5. Example of a flowchart describing the M&E process for a One Health platform.



Instructions:

- Establish data flow and assign relevant stakeholders in the coordinated M&E process.

Step 8.3 **Data management**

In preparation for the implementation of an M&E process, the M&E officer or assigned personnel will need to oversee the management of the data collected. This entails making decisions about the format and software for storing the data, determining the duration for which it should be retained and establishing the frequency of backups. The specifics of data management will vary depending on the type of indicators being used.

The data management should be reflected in the national M&E plan.

Instructions

- Choose the data storage methods and furnish comprehensive information covering format, location, retention duration, backup procedures, data protection and security, and other relevant details.

Step 8

Supporting annexes

- M&E OT framework (Annex C)
- Library of indicators (Annex D)
- M&E plan template (Annex G)

Step 9: **Implement the country M&E process**

At this stage, the national M&E plan is ready. The following steps are recommended to begin the implementation phase.

Step 9.1 **Roll out the M&E plan**

The M&E officer, or the designated personnel, is responsible for oversight and implementation of the M&E plan, and the M&E focal points will oversee the M&E activities within their respective sectors (refer to Module 3, Step 8.2, Figure 5).

Instructions

- Present an overview of the M&E plan to technical activity coordinators across sectors.
- Prepare and pilot/test the Data Collection Tool, provide training and backstopping to reporting actors.

Step 9.2 **Data collection and analysis**

It is the responsibility of the M&E officer or the designated personnel to routinely collect compile, review, and analyse indicator data, as well as receive feedback on data collection tools and reporting processes. Once the data are cleaned, organized and aggregated, they are ready for analysis.

Data analysis should be conducted regularly in line with the M&E plan (refer to **Module 3, Step 8.1**). In this step, qualitative and quantitative approaches are used to evaluate the data collected considering the baselines and targets for each indicator.

The M&E OT materials and results to help with the establishment of data collection and analysis process and activities are:

- The Indicator matrix (refer to Module 2, Step 4.3) outlines the indicator's data collection and analysis methods, and responsibilities.
- The M&E OT Data Collection Tool (refer to Module 2, Step 5) supports structuring the collection of indicators data. The **"Indicator tracking"** tab within the Data Collection Tool is designed to summarize the results of indicators to facilitate the tracking process.
- The Data flow (refer to Module 3, Step 8.2) indicates the movement of data from collection to use, identifying and assigning responsibility for the data collection and analysis.

Instructions

- Collect, compile, analyse and summarize the data results for each indicator regularly.
  - *Source:* Data Collection Tool ("Indicator Tracking" tab).

Step 9.3 **Share results with stakeholders**

This step involves sharing the results with relevant stakeholders and decision-makers. It includes the process of identifying/agreeing on the following aspects:

1. Identification of the target audience:
   - Identify and agree upon the target audience for the results, which may include a range of stakeholders such as decision-makers, community members, managers, donors, partners, implementers or other specific audiences.
2. Data presentation strategy:
   - Determine how the data will be summarized and presented.
   - Clearly outline the use of data in decision-making.
3. Frequency of dissemination:
   - Establish the frequency at which reports, and other communications will be generated and shared.

☆ Best practice

It is essential to share the data with all individuals involved in the collection and reporting processes. Active involvement and informing of stakeholders are key to maintaining robust engagement and continued participation in the M&E process.

Sharing the results with stakeholders offers valuable evidence to guide the multisectoral, One Health approach for zoonotic disease programmes. For example, data results will provide insights into the progress of coordinated zoonotic disease activities, both in a general sense and within specific technical areas. Furthermore, shared results can be used to assess the programme's effectiveness and impact, aiding in informed decisions for future planning and necessary adjustments.

Reporting data results with relevant stakeholders also serves to identify gaps and requirements within the implemented M&E processes and flow. This, in turn, enables necessary modifications to improve the M&E process.

Note: The M&E OT guide steps and materials can and should be revisited and repeated as needed to enhance and adjust M&E activities and resources in alignment with programme changes and shifting priorities.

Instructions

- Prepare the M&E results as defined in your M&E plan.
- Share these results with the relevant stakeholders in a manner that aligns with their preferences and requirements.

Step 9

Supporting annexes

- M&E plan template (Annex G)

Annexes

Annex A. **Template terms of reference for the M&E planning team**

The M&E planning team will be composed of representatives from key organizations engaged in multisectoral One Health zoonotic disease management, including the MCM, such as a One Health Platform or similar group. This includes members from the MCM (if one exists), as well as relevant ministries, agencies, regulatory authorities and other national-level organizations involved in the management, implementation, and M&E of zoonotic disease activities. These representatives are to be nominated by their respective organizations and should comprise both decision-makers and technical staff actively involved in the coordination, management, and evaluation of zoonotic disease activities, including their monitoring and evaluation processes.

The planning team lead is a designated member of the M&E planning team. Ideally, this individual should be a designated M&E officer from the MCM, chosen from among specialists, or officers with experience in M&E. If no such person is available, the planning team lead should at least know about One Health and zoonotic disease-related national programmes.

Overall, the roles and responsibilities of the M&E planning team include:

1. Administration and collation of evidence: responsible for managing the administrative and technical aspects of the M&E process, participating in the M&E OT workshop or meetings, and collecting relevant information pertinent to M&E.
2. Coordination of M&E implementation: coordination and oversight of the country-specific M&E implementation aligned with operational context, priorities and interests.
3. Linking M&E with operational and technical leads: ensuring effective coordination and integration of M&E activities with operational and technical leads involved in zoonotic disease programmes.
4. Liaison with ministries from relevant sectors: facilitating communication and collaboration with ministries and agencies responsible for relevant sectors involved in zoonotic disease management.

Specifically, the roles and responsibilities of the planning team lead include:

1. Multisectoral One Health approach coordination: ensuring that M&E activities in zoonotic disease programmes incorporate a multisectoral, One Health approach.
2. Oversight of M&E activities: overseeing the M&E activities that emerge from the M&E OT workshop and meetings.
3. Integration of M&E OT outcomes: monitoring the incorporation of M&E OT outcomes into the national M&E frameworks for zoonotic disease programmes.

Annex B. **Draft three-day workshop agenda**

DAY 1

Time	Agenda	Facilitator/presenter
08.30-09.00	Registration	Participants
09.00-09.30	Opening remarks Getting started (agenda overview, facilitator introductions)	To be determined
09.30-10.30	Introduction to the M&E OT and objectives for the workshop	Facilitators
	Module 1: Prepare to use the M&E OT	Facilitators
10.30-10.45	**BREAK**	
10.45-12.30	Country presentation: summary of information gathering, objectives and approach for using the M&E OT	M&E planning team
	Discussion and agreement on the M&E OT objectives and approach	All
12.30-13:30	**LUNCH BREAK**	
13.30-14:30	Module 2. Use of the M&E OT Tools: Customize M&E OT framework and develop an Indicator matrix	Facilitators
14.30-15.00	Work session: Customization of the M&E OT framework	All
15.00-15.30	**BREAK**	
15.30-16.45	Work session: Customization of the M&E OT framework (continued)	All
16.45-17.00	Wrap up	To be determined

DAY 2

Time	Agenda	Facilitator/presenter
09.00-09.30	Review day 1 and objectives for day 2	To be determined
09.30-10.45	Module 2. Use of the M&E OT Tools: Library of indicators and development of country indicators	Facilitators
	Work session: Indicators development	All
10.45-11.00	**BREAK**	
11.00-12.30	Work session: Indicators development *(continued)*	All
12.30-13:30	**LUNCH BREAK**	
13.30-15.00	Module 2. Use of the M&E OT Tools: Indicator matrix	Facilitators
	Work session: Indicators matrix	All
15.00-15.30	**BREAK**	
15.30-16.45	Work session: Indicator matrix *(continued)*	All
16.45-17.00	Wrap up	To be determined

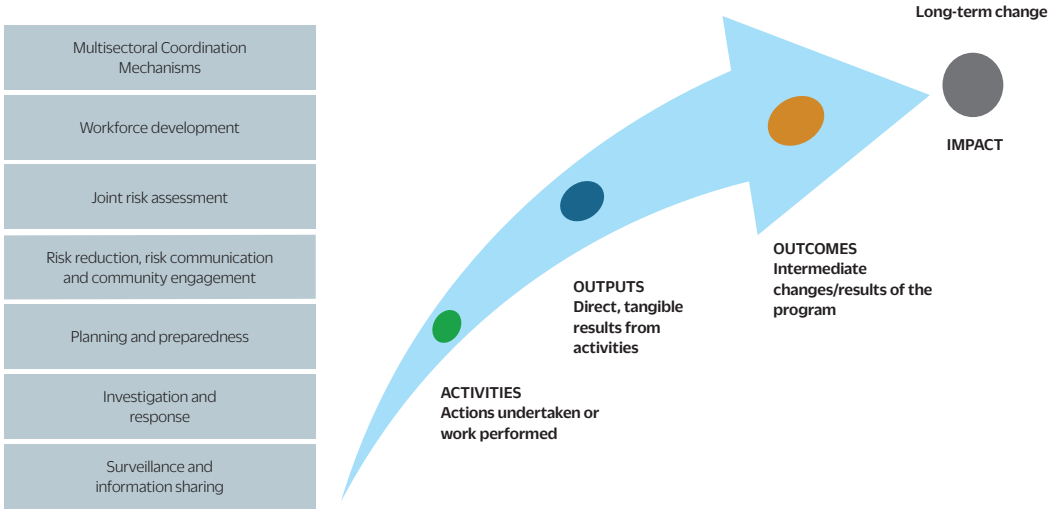
DAY 3

Time	Agenda	Facilitator/presenter
09.00-09.30	Review day 2 and objectives for day 3	To be determined
09.30-10.45	Module 2. Use of the M&E OT Tools Data Collection Tool	Facilitators
	Work session: Data Collection Tool	All
10.45-11.00	**BREAK**	
11.00-11.30	Work session: Data Collection Tool	All
11.30-12.30	Module 3: Implementation and next steps	Facilitators
12.30-13:30	**LUNCH BREAK**	
13.30-15.00	Plenary: Agree on the implementation roadmap and next steps	All
15.00-15.30	**BREAK**	
15.30-16.30	Participant feedback	M&E planning team
16.30-17.00	Wrap up and closing remarks	To be determined

Annex C. **M&E OT framework**

The M&E OT framework serves as the foundation for what countries aim to achieve, effecting change by implementing the best practices and principles from the TZG to address zoonotic diseases. It is structured upon the logical model illustrated in Figure 6.

Figure 6. M&E OT framework logical model



Source: Author's own elaboration.

In this logical model, effective change is designed across:

- Activities: Actions undertaken or work performed to achieve e specific outputs.
- Outputs: Direct, tangible results stemming from specific activities.
- Outcomes: Intermediate changes or results brought about by these outputs or a programme overall (e.g. over five years)
- Impact: The broader, envisioned long-term change (e.g. in ten or more years).

Therefore, activities lead to direct, tangible results (outputs). The outputs start to bring about intermediate change (outcomes) and eventually, outcomes will contribute to long-term change (impact).

The framework is designed to encompass the following seven TZG technical areas:

1. Multisectoral Coordination Mechanisms (MCM)
2. Workforce development (WFD)
3. Joint risk assessment (JRA)
4. Risk reduction, risk communication and community engagement
5. Planning and preparedness
6. Investigation and response (CIR)
7. Surveillance and information sharing (SIS)

In the development of the M&E OT framework, overall assumptions were considered:

1) High-level support (political will, finances and resources) for M&E activities is in place and available.

2) The M&E OT framework covers principles and best practices to address endemic and emerging zoonotic diseases.

3) For other threats at the human–animal–environment interface (e.g. AMR food safety and food security), the framework will need to be adapted.

M&E OT FRAMEWORK			
Impact: Reduced zoonotic diseases risk and burdens on humans, animals and the environment			
Multisectoral Coordination Mechanisms	**OUTCOME**	**OUTPUT**	**EXAMPLE OF ACTIVITY(S)**
	1. Multisectoral, One Health coordination, communication, and collaboration are strengthened and sustained for zoonotic diseases activities	1. 1 The multisectoral, One Health coordination mechanism is authorized and established	• Review existing policy and legislative instruments and their implementation relevant to One Health, including sector-specific and cross-cutting • Establish new policy and legislative instruments based on identified gaps in One Health policies; and reinforce existing ones • Conduct stakeholder mapping to ensure inclusion of all relevant sectors • Define and endorse MCM membership including all relevant sectors and stakeholders • Record and endorse MCM decisions in a formal governance document by all members • Establish leadership, governance and working arrangements with defined roles, responsibilities and reporting
		1. 2 The multisectoral coordination and communication strategies and programmes are planned and aligned	• Jointly identify priority zoonotic diseases • Agree on zoonotic disease strategy and align plans or develop joint plans • Develop and agree on the MCM strategy and objectives
		1.3 The MCM is sustained through sufficient financial, human and other resources allocation	• Conduct resource mapping (e.g. infrastructure, finances and human resources) • Identify and mobilize resources as needed • Allocate resources to sustain MCM
		1. 4 The multisectoral coordinated administrative and technical activities are implemented, monitored and reviewed	• Identify and coordinate technical activities related to (jointly prioritized) zoonotic diseases • Coordinate subgroups (working groups) as needed for priority technical areas • Identify administrative activities to support function of MCM • Monitor and evaluate technical and administrative activities • MCM supports internal and external communication related to advocacy and information sharing on One Health activities • Advocate for One Health mechanism and its activities among relevant stakeholders

	OUTCOME	OUTPUT	EXAMPLE OF ACTIVITIES
Workforce development	2. The workforce is trained, maintained and mobilized to work collaboratively across relevant sectors for effective control of zoonotic diseases	2.1 Multisectoral stakeholders (MCM or similar group) use a One Health approach to plan for workforce management and development	• Convene and engage key stakeholders for workforce development activities • Agree on objectives, goals, and define roles and responsibilities of stakeholders
		2.2 The workforce is defined and includes all relevant sectors and disciplines that contribute to zoonotic disease management	• Identify coordinated functions (action and activities) and occupations (roles and capacities) that are necessary for a One Health approach to zoonotic disease
		2.3 Workforce gaps and needs (including human resource needs and education/ training strategies) are identified and addressed with sufficient resources	• Gather and review information of the current sector-specific and multisectoral workforce situation (national and international assessments, frameworks, policies or regulations) • Use existing tools and processes to identify and analyse workforce gaps and needs across all sectors for current and future professionals • Identify and allocate resources to address workforce gaps and needs
		2.4 Workforce strategy/plan is implemented and regularly reviewed to address identified gaps and needs	• Develop, implement and review workforce strategy that addresses human resource needs and education/training strategies for workforce development and management • Align One Health workforce strategy with existing national strategies and plans for zoonotic diseases

OUTCOME	OUTPUT	EXAMPLE OF ACTIVITIES
3. Joint risk assessments are routinely used to inform decisions and actions	3.1 JRA process (including multisectoral group) and governance structure are established/ designated	• Identify members and establish the leadership group (JRA steering committee), technical team, and stakeholder group with defined roles and responsibilities
	3.2 JRA process is integrated into national policies and strategic planning for zoonotic disease management	• Approve JRA process as an activity under the national system/policy for management of zoonotic diseases by all relevant ministries and agencies
	3.3 JRA process is supported through sufficient financial, human and other resources	• Train and maintain human resource capacity in relevant sectors to conduct JRAs
	3.4 JRAs are conducted to inform preparedness and control of zoonotic diseases	• Conduct JRA and estimate and characterize risks for priority zoonotic diseases, events and emergencies as needed • Complete the JRA report that documents the assessment • Use JRA results to inform related risk communication • Use JRA results to inform risk management • Distribute the final JRA report to all relevant sectors
	3.5 JRAs are reviewed and in-country implementation processes are revised and adjusted according to evaluation and feedback	• Conduct JRA reviews to evaluate, adjust and optimize JRA implementation processes

	OUTCOME	OUTPUT	EXAMPLE OF ACTIVITIES
	4. Coordinated risk reduction, risk communication and community engagement practices are routinely used	4.1 Network or multisectoral One Health groups function to identify, engage, coordinate activities for risk reduction, risk communication and community engagement with stakeholders and affected populations	• Mapping stakeholders and affected populations, with specific consideration given to vulnerable and hard-to-reach populations, and those who may be disproportionately affected • Designate existing or establish new multisectoral communication networks • Engage and communicate with all relevant stakeholders and affected populations
		4.2 Risk reduction, risk communication and community engagement evidence-based strategies and plans to manage zoonotic disease are coordinated, aligned and sufficiently resourced across participating sectors	• Develop risk reduction strategies and plans based on identified risk factors (through JRA or other means) for coordinated risk reduction and communication • Develop joint risk communication and community engagement strategy and plan • Allocate resources to implement and sustain coordinated risk reduction, risk communication and community engagement strategies and associated activities
		4.3 Risk reduction, risk communication and community engagement activities are jointly developed and implemented with stakeholders and affected populations	• Implement risk reduction practices across relevant stakeholders based on identified risk factors • Develop and communicate jointly produced key messages in a timely manner to all relevant stakeholders • Engage with community stakeholders to co-develop messages and appropriate communication tools for a specific affected population
		4.4 Risk reduction, risk communication and community engagement strategies and activities are reviewed and adapted based on evaluation and feedback from stakeholders and affected populations	• Monitor the implementation and impact of risk reduction activities • Engage and gather feedback from stakeholders and communities, and utilize it for improvement of risk reduction activities • Engage and gather feedback from stakeholders and communities, and utilize it for improvement of risk communication strategies and messages

OUTCOME	OUTPUT	EXAMPLE OF ACTIVITIES
5. Coordinated strategic planning and preparedness practices for zoonotic diseases are utilized	5.1 Multisectoral stakeholders (MCM or similar group) use a One Health approach to plan and prepare for zoonotic disease response and recovery	• Identify and engage stakeholders according to mandate and expertise to zoonotic disease management
	5.2 National policies, legislation, laws, regulations, or other government instruments support joint emergency management for zoonotic diseases	• Analyse existing policies, legislation, laws, regulations, or other government instruments relevant to zoonotic diseases emergency management to identify gaps • Review existing or establish new national rules, policies, guidelines and regulations to address identified gaps
	5.3 Coordinated command and communication structure and process are established, incorporating all relevant sectors to be activated in case of emergency	• Determine a clear chain of command with designated roles and responsibilities and communication processes in case of emergency
	5.4 Coordinated strategic planning for zoonotic disease management and control are in place and agreed upon by all relevant sectors	• Perform situation assessment on coordinated strategic planning for zoonotic disease management (e.g. strengths, weakness, opportunities and threats [SWOT] analysis) • Develop and implement a joint preparedness, response and recovery plan with all relevant stakeholders
	5.5 Standard operating procedures (SOPs) for emergency management of zoonotic diseases are in place and tested	• Develop and implement SOPs to operationalize the preparedness, response and recovery plans • Test SOPs and revise accordingly
	5.6 Resources (e.g. personnel, funding, equipment and supplies) are in place and ready to be deployed in case of emergency	• Identify (map) and allocate resources (e.g. personnel, equipment, supplies, finances) needed to implement emergency management • Conduct joint training for staff from all sectors involved in the coordinated response to zoonotic disease emergencies
	5.7 Planning and preparedness to zoonotic diseases is assessed/evaluated	• Carry out multisectoral simulation exercises to test preparedness for emergencies • Conduct reviews (e.g. interaction, after-action) to inform and adjust response and preparedness activities across sectors

OUTCOME	OUTPUT	EXAMPLE OF ACTIVITIES
6. Coordinated investigation and response enable effective prevention, detection and control for zoonotic diseases	6.1 Multisectoral stakeholders (MCM or similar group) use a One Health approach to coordinate investigation and response	• Identify all relevant sectors, stakeholders and as appropriate external experts, to support coordinate investigation and response • Identify coordination committee (e.g. interministerial group) and technical subgroups (e.g. surveillance, epidemiology and laboratories; disease control; risk communication; etc.) involved in the response and how they interact with each other and with an MCM • Designate roles and responsibilities of stakeholders for coordinated investigation and response to zoonotic disease • Establish a memorandum of understanding (MoU) for investigation and response coordination, management and operations across sectors • Align coordinated investigation and response with strategic planning and surveillance efforts (e.g. linking to emergency response protocols and SOPs)
	6.2 Coordinated investigation and response protocols are developed and aligned with technical activities across all relevant sectors	• Develop and establish framework, protocols and SOPs for joint investigation and response, including field-level operations (e.g. deploy investigation teams, sample collection laboratory processing) • Ensure protocol and SOPs facilitate data and information collection and sharing within and between sectors
	6.3 Coordinated investigation and response is supported through sufficient financial, human (e.g. trained workforce) and other resources (e.g. infrastructure, personal protective equipment (PPP), etc.)	• Establish written agreements and procedures on coordinated financial and accounting processes for staff and other resources • Assess the needs, allocate and share resources across relevant sectors for coordinated investigation and response • Conduct joint training for investigation and rapid response to zoonotic disease events for staff in all sectors
	6.4 The zoonotic disease situation is assessed jointly based on decision-making processes to determine the type and scale of investigation and response required	• Sectors share all necessary information about the ongoing outbreak • Use established decision tools and processes from sector-specific or multisectoral approach to trigger an alert and make decisions for coordinated investigation and response
	6.5 Coordinated investigation and response for zoonotic disease events is conducted, including all relevant sectors	• Conduct coordinated investigation and response based on protocols and SOPs developed, and adapt them to the zoonotic disease event as necessary • Share situational reports within and across sectors to inform a dynamic coordinated investigation and response

OUTCOME	OUTPUT	EXAMPLE OF ACTIVITIES
7. A coordinated surveillance and information sharing system (SIS) for zoonotic diseases is established, maintained and utilized	7.1 A multisectoral group (platform, task force, etc.) responsible for implementation and management of the coordinated surveillance system for zoonotic diseases is functional	• Identify/establish and institutionalize a multisectoral stakeholder group for the management of the coordinated surveillance system for zoonotic diseases • Operationalize the multisectoral coordination stakeholder group for the coordinated surveillance system for zoonotic diseases
	7.2 National rules, policies, guidelines or regulations enable coordinated surveillance, and data and information sharing across sectors for zoonotic diseases	• Review and identify gaps in existing national rules, policies, guidelines, and regulations, as well as their implementation, relevant to coordinated surveillance and data and information sharing • Establish new national rules, policies, guidelines and regulations based on identified gaps to enable coordinated surveillance
	7.3 Surveillance strategy and plans are developed, agreed and aligned across relevant sectors for the implementation of the coordinated SIS	• Identify, discuss and agree on objectives for a coordinated surveillance system by all participating stakeholders • Develop and align coordinated surveillance strategies with strategic planning on prevention, investigation of and response to zoonotic diseases • Define and assign actions to be taken by each of the sectors involved in the development of the system
	7.4 Human, financial and other resources are identified and assigned according to needs of all relevant sectors to establish and maintain coordinated surveillance activities and information sharing mechanisms	• Assess the needs, allocate and share resources across relevant sectors for implementation and maintenance of the coordinated surveillance systems and information sharing mechanisms • Identify, build, train and maintain human resource capacities across disciplines for the coordinated surveillance system and information sharing mechanisms
	7.5 Multisectoral laboratory network is in place, functional and supported by shared/harmonized sample collection, transporting, testing and result/data recording procedures	• Identify and engage relevant laboratories for zoonotic disease/other shared threats for the coordinated surveillance system and laboratory information sharing • Conduct collaborative activities (e.g. communication, simulation exercises, laboratory protocols, specimen transportation, research, quality assurance) and coordinate resources within the multisectoral laboratory network
	7.6 There is an established process to share surveillance data and/or information between sectors	• Agree on the type of information (e.g. common data elements) that can be shared among the sectors • Utilize existing informal and formal mechanisms and agreements to share information and data with relevant stakeholders • Establish and assign sector-specific responsibilities of data collection, reporting and management
	7.7 A coordinated surveillance system is functional and meets the requirements and purposes agreed upon by the sectors utilizing it	• Establish interoperable or joint platforms for systematic surveillance data exchange • Regularly discuss surveillance data analysis and results prepared singularly and jointly across sectors for collective interpretation and use • Implement joint and sector specific surveillance activities in a coordinated manner • Review, test and update regularly the functionality of the coordinated surveillance system

Annex D. **Library of indicators**

Description

The Library of indicators provides 28 indicators to measure the progress in achieving the M&E OT framework result levels (e.g. outputs, outcomes, impact) across the seven TZG technical areas. Countries can choose and adapt them according to the national context and needs. Indicators from the library are categorized below based on the result level that they measure:

- Output indicators: Measure the direct, tangible results or products of activities within a programme.
- Outcome indicators: Measure the intermediate changes or results of a programme.
- Impact indicators: Measure the long-term achievement or high-level goal of the programme.

The output and outcome indicators in the library are grouped into two categories: overarching and specific. Overarching indicators are adaptable to all technical area outputs, and specific indicators can be used to measure progress for each corresponding technical area outputs and outcomes. Tracking these indicators can highlight areas for improvement or change needed to obtain the desired country's results. An indicator reference sheet is provided for each of the indicators.

Indicator reference sheet description

Indicator Number (in order, for reference) **Library code (according to type of indicator for reference)**	**Indicator name**
Result level (that indicator aim to measure, e.g. output, outcome, impact) Application (how indicator is applied to TZG technical areas, e.g. technical area specific or overarching)	
Explanation/justification	Explain the overall relevance of this indicator to the technical area and why it is relevant for tracking progress.
Relevant technical area	List the relevant technical areas. Select from the seven TZG technical areas, if applicable (e.g. multisectoral coordination mechanisms, joint risk assessment, investigation and response etc.). Note that overarching indicators can be applied to all technical areas.
Definition of key terms	Indicator definitions should clearly explain all terms/elements of the indicator to ensure consistent interpretation, and that intended measurements are reliably collected. Any vague terms should be defined. This is also a place to add any parameters.
Calculation	If there is a specific calculation required to derive the data that can be included (e.g. if it is a ratio, we can include a description of the numerator and the denominator).
Disaggregations	List the different categories by which the data for this indicator can be grouped by (e.g. male/female, sectors [human, animal, environment], technical area etc.).

Baseline **The value of an indicator before major implementation actions**	Provide brief guidance/overall steps required to determine the baseline for this indicator. There may be circumstances in which a project or programme is already being implemented and an appropriate baseline has not previously been identified. In these cases, a retrospective baseline may be used.
Target **A specific, expected or planned level of a result/value to be achieved for the indicator measured, within a specific timeframe with a given level of resources. The target is set with the expectation that this progress will be realized within a future timeframe.**	What is the final target for this indicator? Target refers to the desired level of achievement for a specific indicator. It is the benchmark against which actual performance can be compared to see if the initiative or intervention is on track. Targets for quantitative indicators are numerical, whereas targets for qualitative indicators are descriptive. A final target is the planned value of an indicator at the end of the programme or project. There could also be interim targets set for the key points of time in between the baseline and final target in instances where change is expected and data can be collected.
Reporting frequency **The frequency at which indicator data will be collected**	Propose a reporting frequency: Monthly/semi-annual/annual.
Unit of measure **Unit being counted/listed in the indicator**	What is being counted/listed? (e.g. individuals, plan document, publication document etc.)
Means of verification **The supporting evidence for verifying the data**	What could be the supporting evidence to verify the data?
Limitations/consideration	List any caveats that need to be considered when interpreting or using the data from this indicator. For example, the increase in number of plans/activities/ publications does not mean that the quality of the plans/activities/ publications have improved.

The list of indicators

1. O1) Output indicator: Number/list of policy/legal instruments enabling implementation of multisectoral, One Health coordinated activities
2. O2) Output indicator: Proportion of relevant sectors included in coordinated activities or the MCM
3. O3) Output indicator: Proportion of coordinated activities that are sufficiently resourced
4. O4) Output indicator: Number of coordinated activities organized/conducted
5. O5) Output indicator: Number of strategies/plans jointly developed/revised/adopted by relevant sectors
6. O6) Output indicator: Number of joint training in relevant technical areas
7. O7) Output indicator: Number/list of One Health coordination structures and/or governance processes established
8. O8) Output indicator: Number of assessments conducted to inform revision or development of coordinated activities
9. O9) Output indicator: Number/list of coordinated operational documents developed/implemented
10. O10) Output indicator: Proportion of priority zoonotic diseases that have a joint plan
11. W1) Outcome indicator: Demonstrated evidence for the workforce that is competent, maintained and mobilized by relevant sectors for an effective coordinated zoonotic disease management

12. W2) Output indicator: Workforce functions and occupations are identified according to needs
13. W3) Output indicator: Number of coordinated activities implemented to train, maintain and mobilize a workforce
14. M1) Outcome indicator: Demonstrated evidence for coordination functions by MCM
15. P1) Outcome indicator: Demonstrated evidence for joint management and operational infrastructure for effective coordinated planning and preparedness for zoonotic disease events
16. IR1) Outcome indicator: Proportion of zoonotic disease events for which timeliness metrics were used to drive performance improvement process throughout the investigation and response
17. IR2) Output indicator: Joint (rapid) response team roster is shared and mobilized across sectors
18. IR3) Output indicator: Proportion of zoonotic disease events that are evaluated using a decision tool/process
19. IR4) Output indicator: Proportion of zoonotic disease events that have joint/coordinated investigation and/or response
20. J1) Outcome indicator: Number of activities implemented for zoonotic diseases based on joint risk assessment (JRA) recommendations
21. J2) Output indicator: Number of professionals trained to conduct joint risk assessment (JRA)
22. S1) Outcome indicator: A coordinated surveillance and information sharing system or systems (SIS) for zoonotic diseases established at the national level/piloted
23. S2) Output indicator: Proportion of priority zoonotic diseases for which quality surveillance data are shared with all relevant sectors
24. R1) Output indicator: Number/list of identified and engaged stakeholders from relevant sectors for risk reduction, risk communication and community engagement
25. R2) Output indicator: Number of risk reduction/risk communication and community engagement activities jointly developed/implemented
26. R3) Outcome indicator: Proportion of implemented activities that are adopted by communities
27. I1) Impact indicator: Direct change in units measured resulting from zoonotic disease prevention and control
28. I2) Impact indicator: Direct change in State Party Self-Assessment Annual Reporting (SPAR) indicator levels (C12.1)

Indicator reference sheets

1 CODE O1 **Result level: output** **Application: overarching**	**Number/list of policies/legal instruments enabling implementation of multisectoral, One Health coordinated activities**
Explanation/justification	One of the main components to strengthening the enabling environment is the establishment of inclusive and sound policies and legal instruments that can encourage the adoption, scale up and sustainability of the capacities for multisectoral activities. This indicator is intended to measure the number or list of policies and/or legal instruments in place enabling and authorizing implementation of targeted multisectoral, One Health coordinated activities.
Relevant technical area	All.
Definition of key terms	Policies: A "policy" is a law, regulation, procedure, administrative action, incentive or voluntary practice of governments and other institutions. It includes legal and regulatory frameworks, national and subnational policies, and operational policies (rules, regulations, codes, etc.) that support multisectoral, One Health activities for zoonotic diseases prevention, control and response in case of emergency across all relevant sectors. Legal instruments: These are written legal documents that record formal execution of legally enforceable acts or agreements. This can include any regulatory instrument setting up a coordination mechanism across ministries and other entities for zoonotic diseases governance.
Calculation	Total (sum) number and list of policies and legislative instruments in force.
Disaggregations	Country level: national, subnational. Type: government level national policy, institutional policy, law/legal framework, and other legal instruments. Technical area: planning and preparedness; surveillance and information sharing; laboratory; investigation and response; risk reduction; risk communication and community engagement; workforce development; multisectoral coordination mechanisms.
Baseline	Baseline to be set by the country based on policies and legislative instruments in place at the start of the monitoring process, within a specific timeframe (e.g. current year). Example: One policy (e.g. One Health Strategic Plan 2018-2022) and five legal instruments relevant to One Health (list) were in force in the current year.
Target	Target (the expected/planned level of an indicator value) to be set by the country within a specific timeframe. This should be based on policies and legislative instruments that are intended to be in place, which may occur after the monitoring process has already begun. Example: Two new instruments to be added to the current list (baseline) of policies/legal instruments by the end of year XXXX (e.g. develop One Health strategic plan (2024–2029); and sign a memorandum of understanding (MoU) between the ministry of health, ministry of agriculture, and ministry of environment, that clarify roles, responsibilities and collaboration mechanisms).
Reporting frequency	Annual.
Unit of measure	Policies and legislative instruments (number, list).
Means of verification	Policy and legislative documentation.
Limitations/consideration	This indicator does not impact the quality of the policies, laws or legal frameworks. It simply tracks the number of policies and legislative instruments governing in the country. This indicator also does not track enforceability of policies and legislative instruments.

2 CODE O2	**Proportion of relevant sectors included in coordinated activities or in the MCM**
Result level: output **Application: overarching**	
Explanation/justification	This indicator is intended to measure the inclusion of sectors across the human–animal–environment interface (multisectoral, One Health approach) in the implementation and coordination of activities to address zoonotic diseases.
Relevant technical area	All.
Definition of key terms	Relevant sectors/disciplines/stakeholders/ministries: (from TZG): At a minimum, those sectors, disciplines, stakeholders or ministries that are key to the specific health threat to be addressed using a multisectoral, One Health approach. Other sectors and agencies that are stakeholders to the health threat (e.g. private stakeholders, academia), may be included as needed. Included: This refers to formal (e.g. MCM membership) or informal type of involvement (e.g. coordination of activities, share of surveillance information and others). Coordinated activities: Activities to address a health threat at the human–animal–environment interface based on collaboration, communication, and coordination across all relevant sectors and disciplines, with the ultimate goal of achieving optimal health outcomes for both people and animals while safeguarding the environment.
Calculation	Numerator: total number of sectors included in a given coordinated activity or in the MCM. Denominator: total number of relevant sectors for a given coordinated activity or in the MCM.
Disaggregation	Technical area of coordinated activities: planning and preparedness; surveillance and information sharing; laboratory; investigation and response; risk reduction; risk communication and community engagement; workforce development; multisectoral coordination mechanisms.
Baseline	Baseline to be set by the country based on the proportion of sectors included at the start of the monitoring process within a specific timeframe. Example: 50 percent. (out of four target sectors [animal health, human health, environment, wildlife], two sectors [animal health, human health] are involved in the MCM in the current year: 2/4 [50 percent]).
Target	Target (the expected/planned value of an indicator) to be set by the country within a specific timeframe. This should be based on the proportion of sectors that is intended to be included, which may occur after the monitoring process has already begun. Example: 100 percent. (out of four target sectors [animal health, human health, environment, wildlife], all 4 sectors [animal health, human health, environment, wildlife] are expected to be involved in the MCM by year XXXX: 4/4 (100 percent).
Reporting frequency	Annual.
Unit of measure	Sectors (percent).
Means of verification	MCM governance documents (mandate, reports, working arrangements), One Health strategies and plans, coordinated activities and meeting reports.
Limitations/consideration	Defining relevant sectors for coordinated activities or the MCM includes, at a minimum, those sectors that are key to addressing the specific health threat using a multisectoral, One Health approach. Other sectors and agencies that are stakeholders of the health threat (e.g. private stakeholders, academia) may not be represented using this indicator. It may not capture the effectiveness of collaboration and the level of sector involvement.

3 CODE 03	**Proportion of coordinated activities that are sufficiently resourced**
Result level: output **Application: overarching**	
Explanation/justification	This indicator is intended to measure how many of the coordinated activities (expressed as a proportion) have the level of resources needed to achieve their objectives.
Relevant technical area	All.
Definition of key terms	Coordinated activities: Activities to address a health threat at the human–animal–environment interface based on collaboration, communication, and coordination across all relevant sectors and disciplines, with the ultimate goal of achieving optimal health outcomes for both people and animals while safeguarding the environment. Sufficiently resourced: The financial, labour, intellectual, skill and infrastructure requirements of the coordinated activity are met so that it can achieve its objectives successfully. This requires establishing three things: 1) resource requirements; 2) resources available; and 3) comparison thereof.
Calculation	Numerator: number of coordinated activities sufficiently resourced. Denominator: total number of coordinated activities (e.g. the number of those sufficiently resourced plus those that are not sufficiently resourced).
Disaggregation	Type of coordinated activities: assessment, planning, implementation, monitoring and evaluation. Technical area of coordinated activities: planning and preparedness; surveillance and information sharing; laboratory; investigation and response; risk reduction; risk communication and community engagement; workforce development; multisectoral coordination mechanisms. Sectors: animal health, human health, environment, wildlife, other.
Baseline	Baseline to be set by the country based on the proportion of coordinated activities sufficiently resourced at the start of the monitoring process within a specific timeframe. Example: 40 percent. (Ten target coordinated activities identified for measurement, four of them are sufficiently resourced for being implemented at the start of the monitoring process: 4/10 [40 percent]).
Target	Target (the expected/planned value of an indicator) to be set by the country within a specific timeframe. This should be based on the proportion of coordinated activities sufficiently resourced that is intended to be achieved, which may occur after the monitoring process has already begun. Example: 100 percent. (Ten out of ten identified coordinated activities are expected to be sufficiently resourced by an established timeframe: 10/10 [100 percent]).
Reporting frequency	Annual-
Unit of measure	Coordinated activities (percent)-
Means of verification	Resource plans (demands), actual/granted resources, approved budget plans, documentation of activities that could not be implemented as planned because of insufficient resources.
Limitations/consideration	This indicator requires an assessment whether the resources available for a coordinated activity are sufficient. Thus, it requires a form of comparison between resource requirements at the planning stage and the actual resources available for the activity and an interpretation. If there is a small shortfall, the activity may still be able to achieve its objectives. However, if the activity cannot achieve its objectives or targets because of under-resourcing and adaptations are required, this would count as insufficiently resourced.

4 CODE O3	**Number of coordinated activities organized/conducted**
Result level: output **Application: overarching**	
Explanation/justification	Zoonotic diseases cannot be effectively addressed by one sector alone. This indicator is intended to measure collaboration, coordination and communication across all relevant sectors among activities to address zoonotic diseases.
Relevant technical area	All.
Definition of key terms	Coordinated activities: Activities to address a health threat at the human–animal–environment interface based on collaboration, communication, and coordination across all relevant sectors and disciplines, with the goal of achieving optimal health outcomes for both people and animals, while safeguarding the environment. Organized: This refers to the action of organizing or arranging an activity. Conducted: This refers to the execution of an activity or the process of putting a decision/plan into effect.
Calculation	Total (sum) of number of coordinated activities organized or conducted in place.
Disaggregation	Type of coordinated activities: assessment, planning, implementation, monitoring and evaluation. Technical area of coordinated activities: planning and preparedness; surveillance and information sharing; laboratory; investigation and response; risk reduction; risk communication and community engagement; workforce development; multisectoral coordination mechanisms Specific activities: e.g. joint risk assessment, joint investigation, after-action reviews, simulation exercises, meetings, trainings etc.
Baseline	Baseline to be set by the country based on situational analysis identifying coordinated activities organized/conducted at the start of the monitoring process, within a specific timeframe (e.g. current year). Example: Ten conducted coordinated activities identified for this year.
Target	Target (the expected/planned value of an indicator) to be set by the country within a specific timeframe. This should be based on the number of coordinated activities organized/conducted that are intended to be achieved, which may occur after the monitoring process has already begun. Example: Five coordinated activities expected to be conducted for next year.
Reporting frequency	Annual.
Unit of measure	Coordinated activities (number).
Means of verification	MCM governance documents (mandate, reports, working arrangements), One Health strategies and plans, coordinated activities and meeting reports.
Limitations/consideration	The increase in the number of coordinated activities organized/conducted does not measure the effectiveness or the quality of such coordinated activities.

5 CODE O5	**Number of strategies/plans jointly developed/revised/adopted by relevant sectors**
Result level: output **Application: overarching**	
Explanation/justification	Development and adoption of formal multisectoral strategies and plans demonstrates commitment to action at the national level using multisectoral, One Health approach. It facilitates a more effective, strategic implementation of zoonotic disease preparedness and control activities and policies of all ministries responsible for human health, animal health, environment and finance. This indicator is intended to measure the number or list of joint strategies and/or plans developed/revised or adopted by relevant sectors. These plans are expected to provide guidance on planning and coordinating strategic, efficient multisectoral collaboration and on the roles and responsibilities of different stakeholders in zoonotic diseases preparedness and control.
Relevant technical area	All.
Definition of key terms	Strategy (from TZG): A high level, overarching or conceptual plan or set of policies designed to achieve a specific outcome, often operationalized through a specific action plan or operational plan. Plan: An operational or action-oriented description of activities to be undertaken, often based on an overarching strategy. Joint (from TZG): The state of being or doing something together. Developed: When a plan has been prepared and submitted for endorsement/adoption. Revised: When a plan that was already developed (jointly or by one sector only), has been revised and updated to include a multisectoral, One Health approach and define roles and responsibilities of different stakeholders for implementation of the plan. Adopted: refers to the institutionalization of the instruments/tools so that they are established as a part of an official organization. Relevant sectors/disciplines/stakeholders/ministries: (from TZG): at a minimum, those sectors, disciplines, stakeholders, or ministries that are key to the specific health threat to be addressed using a multisectoral, One Health approach. Other sectors and agencies that are stakeholders to the health threat (for example, private stakeholders, academia), may be included as needed.
Calculation	Total (sum) number of strategies/plans jointly developed/revised/adopted
Disaggregation	• Action: developed, revised, adopted • Type: – Strategy/strategic action plan (e.g. One Health action plan) – Operational plan (e.g. surveillance plan, preparedness, response and recovery plan, communication plan) • Topic: – Zoonotic disease (e.g. brucellosis surveillance plan, National Brucellosis Eradication Program, National Rabies Prevention and Control Plan) – Topic area (e.g. One Health; surveillance, preparedness, response and recovery, communication) • Sectors: animal health, human health, environment, wildlife, other.
Baseline	Baseline to be set by the country based on situational analysis identifying joint strategies/plans in place at the start of the monitoring process within a specific timeframe (e.g. current year). Example: Two jointly developed plans (e.g. One Health action plan; National Rabies Prevention and Control Plan) in place this year.

Target	Target (the expected/planned value of an indicator) to be set by the country within a specific timeframe. This should be based on the number of coordinated activities organized/conducted that are intended to be achieved, which may occur after the monitoring process has already begun. Example: Two plans (e.g. jointly revised brucellosis surveillance plan and jointly developed One Health platform communication plan) expected to be in place for next year.
Reporting frequency	Annual.
Unit of measure	Plan and strategy documents (number).
Means of verification	Plan and strategy documents.
Limitations/consideration	This indicator will be able to track the development, revisions and adoption of the joint plans. However, this indicator will not be able to indicate the degree to which the plans are applied to real life events nor how useful they were.

6 CODE O6	**Number of joint training sessions in relevant technical areas**
Result level: output **Application: overarching**	
Explanation/justification	Building a competent national workforce trained in technical skills and in implementation of a multisectoral, One Health approach is necessary to address zoonotic diseases. This indicator is intended to measure the extent of joint training conducted in technical areas to address zoonotic diseases.
Relevant technical area	All.
Definition of key terms	Joint (from TZG): The state of being or doing something together. Training: This refers to education and training programmes that give individuals the knowledge, skills, and abilities they need to meet national and international workforce demands. It includes pre-service (before a person begins professional services or work) and in-service (during professional services or work) programmes. Relevant technical areas: This refers to technical areas listed in the TZG (planning and preparedness, surveillance and information sharing, investigation and response, risk reduction, risk communication and community engagement, workforce development, multisectoral coordination mechanisms).
Calculation	Total number (sum) of joint trainings.
Disaggregation	Type of trainees: pre-service, in-service. Type of One Health core competencies: management, communication, leadership, teamwork, informatics, values and ethics, leadership, teamwork, collaboration, roles and responsibilities, and systems thinking. Note: If relevant and needed, it is also possible to track participants of the training by gender (male/female/other), relevant sector (animal, human, environment, wildlife, other).
Baseline	Baseline to be set by the country based on situational analysis identifying joint trainings completed at the start of monitoring process, within a specific timeframe (e.g. current year). Example: One joint training (e.g. outbreak simulation exercise) completed this year.

Target	Target (the expected/planned value of an indicator) to be set by the country within a specific timeframe. This should be based on the number of joint training sessions to be completed, which may occur after the monitoring process has already begun. Example: Two joint training sessions (e.g. joint risk assessment and biosecurity training) to be completed by the end of this year.
Reporting frequency	Semi-annual or annual.
Unit of measure	Joint training sessions (number).
Means of verification	Training reports, attendance reports.
Limitations/consideration	Data from government training may be available and accessible, however from academic, private, non-governmental, professional society sources may be limited due to access, range of training and data sharing policies.

7 CODE O7 **Result level: output** **Application: overarching**	**Number/list of One Health coordination structures and/or governance processes established**
Explanation/justification	This indicator is intended to measure the number of multisectoral, One Health coordination structures and governance processes in place for zoonotic disease activities. Formal and informal One Health coordination structures act to strengthen or develop collaboration, communication and coordination across sectors responsible for addressing zoonotic diseases. One Health coordination structures allow ministries and relevant partners to interact on a regular basis to support improved multisectoral management to address One Health challenges, including zoonotic diseases.
Relevant technical area	All.
Definition of key terms	One Health coordination structures: Formal refers to any standing, organized group that is formally established by government, ministries, institutions, or organizations with clearly defined mandate and authority. It includes key representatives of relevant sectors to address zoonotic diseases. Informal operates at a technical level without formal establishment and a clearly defined structure. They operate without formal and written rules or procedures. Informal coordination structures might emerge unplanned with ad-hoc communication channels. They include key representatives of relevant sectors to address zoonotic diseases. Governance (from TZG): The set of structures, policies, processes, and/or decisions that support the management of a system or group. Governance processes: These refer to any set of written or documented structures, policies or guidelines that define the roles and management of a multisectoral One Health coordinating structure. Examples of formal governance processes include memoranda of understanding (MoUs), agreements and governance manuals.
Calculation	Total number (sum) of existing One Health coordination structures. Total number (sum) of existing governance processes.
Disaggregation	Type: coordination structures formal or informal) and governance processes. Technical area: planning and preparedness, surveillance and information sharing, laboratory, investigation and response, risk reduction, risk communication and community engagement, workforce development, multisectoral coordination mechanisms. Zoonotic disease: e.g. list existing multisectoral working groups and task forces for specific zoonotic disease.

Baseline	Baseline to be set by the country based on situational analysis identifying One Health coordination structures and/or governance processes established at the start of monitoring process, within a specific timeframe (e.g. current year). Example: One coordination structure (e.g. a One Health coordination taskforce with an informal role of a national One Health Platform) established for this current year.
Target	Target (the expected/planned value of an indicator) to be set by the country within a specific timeframe. This should be based on the One Health coordination structures and/or governance processes that are intended to be established, which may occur after the monitoring process has already begun. Example: Three One Health coordination structures and governance processes (e.g. One Health Platform, a ministerial order formalizing it, One Health platform governance manual) expected to be officially established by next year.
Reporting frequency	Annual.
Unit of measure	Coordination structures and governance processes (e.g. MoUs, agreements, governance manuals) (number, list).
Means of verification	Coordination structures: Membership/participants lists, meeting reports and meeting minutes for One Health Task Force or platforms, work groups, coordinating committees, planning committees, planning teams and other relevant bodies that interact on a regular basis (virtually, remotely, in-person) to support One Health activities for zoonotic diseases. Evidence of communication exchange among email, WhatsApp groups and other informal related bodies with members that interact with each other via these communication channels. Governance processes: MoUs, agreements, governance manuals, policies and other related documents used for defining a One Health coordinating structure.
Limitations/consideration	List of coordinating structures and governance processes, whether formal or informal, indicates existence, but does not provide insight on the level of engagement and participation across sectors.

8 CODE O8	**Number of assessments conducted to inform revision or development of coordinated activities**
Result level: output **Application: overarching**	
Explanation/justification	This indicator is intended to measure the capacity and processes to test, assess, and review, revise, or develop accordingly coordinated activities implemented in multisectoral collaboration for the prevention, detection, and response to zoonotic disease events of either endemic or unknown etiology. This testing/assessments and review should involve all implementing agencies, including the ministry of health, the ministry of agriculture, ministry of environment (including wildlife), and other relevant government agencies.
Relevant technical area	All.
Definition of key terms	Assessment: This refers to the wide variety of methods or tools used to evaluate, measure and document the results for different purposes, including identification of gaps and their further improvement. For example, economic assessments, intra and after-action reviews and simulation exercises.
Calculation	Total (sum) number of assessments conducted to inform revision or development of coordinated activities.

Disaggregation	Technical area: planning and preparedness; surveillance and information sharing; laboratory; investigation and response; risk reduction; risk communication and community engagement; workforce development; multisectoral coordination mechanisms.
Baseline	Baseline to be set by the country according to conducted assessments related to coordinated One Health approach and zoonotic diseases and reviews made/documents developed according to the assessment results within a specific timeframe (e.g. current year). Example: Two assessments (e.g. joint risk assessment and outbreak simulation exercise) conducted this year.
Target	Target (the expected/planned value of an indicator) to be set by the country within a specific timeframe. This should be based on the assessments that are intended to be conducted to inform revision/ development of coordinated activities, which may occur after the monitoring process has already begun. Example: Three assessments (one SIS OT workshop, one joint risk assessment, one JEE) expected to be conducted by next year.
Reporting frequency	Semi-annual or annual.
Unit of measure	Assessments (number).
Means of verification	Plans documents, SOPs and other related documents used for planning and implementation of coordinated/joint activities; assessment/simulation exercises/intra and after-action reviews reports.
Limitations/consideration	Number of assessments that resulted in revision or development of coordinated activities does not reflect the quality of the review or improved implementation of coordinated activities.

9 CODE O9 **Result level: output** **Application: overarching**	**Number/list of coordinated operational documents developed/implemented**
Explanation/justification	This output indicator is intended to measure the number of operational documents in place/used for the implementation of multisectoral, One Health activities to address zoonotic diseases.
Relevant technical area	All.
Definition of key terms	Coordinated operational documents: A standardized operational description of activities to be undertaken and/or used as a reference across all relevant sectors to address zoonotic diseases. These documents provide specific step-by-step operational guidelines and instructions. For example, SOPs, manuals and protocols. Developed: When an operational document has been prepared and submitted for implementation.
Calculation	Total (sum) number of coordinated operational documents.
Disaggregation	Type of operational documents: manuals, SOPs, protocols, plan Technical areas: planning and preparedness; surveillance and information sharing; laboratory; investigation and response; risk reduction; risk communication and community engagement; workforce development; multisectoral coordination mechanisms. Sectors: animal health, human health, environment, wildlife, other.
Baseline	Baseline to be set by the country, defined based on the operational documents related to the One Health approach and zoonotic diseases which have been developed and/or implemented within a specified period (e.g. the current year). Example: Two coordinated operational documents (e.g. joint investigation protocol; risk communication protocol) developed this year.

Target	Target (the expected/planned value of an indicator) to be set by the country within a specific timeframe. This should be based on the country's objective to develop and start implementation of targeted operational documents within an identified timeframe. Example: Two coordinated operational documents (e.g. joint investigation protocol implemented in the field; the risk communication protocol implemented in the field) to be implemented by the end of the current year.
Reporting frequency	Annual.
Unit of measure	Coordinated operational documents (number, list).
Means of verification	SOPs, manuals and protocols from the list.
Limitations/consideration	The increase in the list of operational documents developed/implemented does not mean that the quality of documents has improved, nor that it has been updated according to the country's changing needs and context. A suggested indicator to address that could be the number of coordinated operational documents revised based on assessment.

10 CODE O10 **Result level: output** **Application: overarching**	**Proportion of priority zoonotic diseases that have a joint plan**
Explanation/justification	Jointly prioritizing zoonotic diseases, collaborating on agreed priorities, and developing joint plans are essential activities that all relevant sectors in countries should undertake using a multisectoral, One Health approach. This output indicator aims to measure the degree to which the human health, animal health and environment sectors in a country collaboratively develop plans to address priority zoonotic diseases.
Relevant technical area	All.
Definition of key terms	Priority zoonotic diseases: Zoonotic diseases of greatest concern that should be jointly addressed by human health, animal health and environment sectors in a country or region. The process used in prioritizing such diseases should follow a multisectoral, One Health approach. Joint (from TZG): The state of being or doing something together. Plan (from TZG): An operational or action-oriented description of activities to be undertaken, often based on an overarching strategy.
Calculation	Numerator: total number of priority zoonotic diseases with a joint plan. Denominator: total number of priority zoonotic diseases (include those with joint plan and without a joint plan).
Disaggregation	Technical area: planning and preparedness; surveillance and information sharing; laboratory; investigation and response; risk reduction; risk communication and community engagement; workforce development; multisectoral coordination mechanisms. Sectors: animal health, human health, environment, wildlife, other.
Baseline	Baseline to be set by the country, based on the proportion of priority zoonotic diseases that have a joint plan at the start of the monitoring process within a specified period (e.g. the previous year). Example: 40 percent during the previous year. (ten priority zoonotic diseases identified for management, four of them have joint plans: 4/10 [40 percent])-

Target	Target (the expected/planned value of an indicator) to be set by the country. This should be based on the number of joint plans that are intended to be developed among the identified priority zoonotic diseases, which may occur after the monitoring process has already begun. Example: 80 percent by year XXXX. (considering ten priority zoonotic diseases identified, the aim is to have joint plans for eight of them by the end of the target year: 8/10 [80 percent]).
Reporting frequency	Annual.
Unit of measure	Priority zoonotic disease (percent).
Means of verification	Joint plans and strategies endorsed by relevant sectors.
Limitations/consideration	This indicator does not measure the extent in which plans are implemented/ used across participating sectors.

11 CODE W1 **Result level: outcome** **Application: specific**	**Demonstrated evidence for the workforce that is competent, maintained and mobilized by relevant sectors for an effective coordinated zoonotic disease management**
Explanation/justification	This is an outcome indicator requiring evidence that the workforce is competent, maintained and/or mobilized to work collaboratively across relevant sectors, enabling an effective coordinated zoonotic disease preparedness and response. This indicator with its supporting evidence, should permit for regular review and assessment of overall efficacy of multisectoral, One Health approach to the management of zoonotic diseases.
Relevant technical area	Workforce development.
Definition of key terms	Demonstrated evidence for this indicator can include a wide range of documents, such as assessments internal and peer reviews, case studies, significant stories of change and reports relating to workforce development (e.g. labour market analysis, workforce needs assessment) that demonstrate the outcome. Competent: Able to integrate knowledge, skills and attitudes in their performance of tasks in each context. Workforce: relevant functions and occupations across multiple disciplines and sectors at the human–animal–environment interface to jointly address zoonotic diseases. This includes but is not limited to students and staff of schools and universities, technical professionals, policymakers, paid and unpaid community leaders or workers in the government, non-governmental, academic and private sectors. Maintain: workforce is adequately recruited and employed across sectors to best meet national needs. Mobilize: workforce is adequately and readily deployed or distributed across relevant sectors and geographical locations to best meet national needs. Relevant sectors/disciplines/stakeholders/ministries (from TZG): at a minimum, those sectors, disciplines, stakeholders, or ministries that are key to the specific health threat to be addressed using a multisectoral, One Health approach. Other sectors and agencies that are stakeholders to the health threat (e.g. private stakeholders, academia), may be included as needed. Zoonotic disease management: Activities with respect to all five stages of the disease management cycle: prepare, prevent, detect, respond and recover.
Calculation	N/A
Disaggregation	N/A

Baseline	The baseline to be set by the country should be grounded in evidence that demonstrates the competence, maintenance and mobilization of the workforce at the onset of the monitoring process, typically within a specified period (e.g. the previous year). Example: Key evidence documents showing the strength of competencies to perform a particular job function for coordinated zoonotic disease management during the previous year.
Target	Target (the expected/planned value of an indicator) to be set by the country. In the case of this qualitative indicator, the target is based on the anticipation of an enhanced workforce capacity that will be achieved. This timeframe may commence after the monitoring process has already begun. Example: Demonstration of a competent, maintained, and mobilized workforce in coordinating zoonotic disease management by the year XXXX. The target can encompass: An updated list of key evidence documents that have been developed or refined during the programme's duration. Examples: an after-action review report highlighting capable workforce as a strength in successful response. Evidence of workforce deployment in real-time situations and the outcomes of such mobilization. Examples: evidence of experts in a roster being deployed to support a zoonotic disease outbreak operation within a limited timeframe. Internal and external assessments of the workforce's effectiveness in handling zoonotic disease management with comparison to the baseline results over time. Examples: improved JEE scores pertaining to human resources. Analysis results. Examples: numbers of graduating workforce professionals from accredited higher education institutions over time, and numbers and distribution of the workforce over time.
Reporting frequency	Annual.
Unit of measure	List of documents, information on reviews/assessments undertaken, study, research, analysis results, peer-reviews (qualitative measure).
Means of verification	Documents, assessments, reports relating to the multisectoral, One Health approach for workforce development.
Limitations/consideration	This indicator requires careful review and interpretation. The availability of documented evidence may not necessarily translate into the effective management of zoonotic diseases. As such, further consideration should be given to: 1) How well any strategies and plans have been implemented in practice; and 2) Efforts to ensure equitable distribution of workforce development activities, across sectors and occupations, geographies (e.g. at the subnational level) and individuals (e.g. gender).

12 CODE W2	**Workforce functions and occupations are identified according to the needs**
Result level: output **Application: specific**	
Explanation/justification	This is an output indicator aiming to collect evidence of the identification of functions and occupations in the workforce that are required to work collaboratively across relevant sectors for effective zoonotic disease management. Needs can be identified broadly for One Health threats or for specific/prioritized zoonotic diseases. The Workforce Development Operational Tool (WFD OT) offers a stepwise approach for countries to identify functions and occupations.
Relevant technical area	Workforce development

Definition of key terms	Functions (from WFD OT): Sector-specific and multisectoral responsibilities required to ensure effective zoonotic disease management. Examples of functions (extracted from WFD OT) are: • Coordinate programmes and resources • Jointly develop harmonized risk communication messages and materials • Lead a joint outbreak investigation • Monitor and evaluate coordination between sectors in peacetime and in emergencies Occupations (from WFD OT): These are identified and aligned with the International Standard Classification of Occupations of the International Labour Organization to the extent possible. Identified occupations include those traditionally involved in zoonotic disease management (i.e. human health, animal health, environment and wildlife) and those outside the traditional sectors and disciplines. Examples of occupations include: • Biostatistician • Microbiologist • Scientist/researcher • Veterinarian/veterinary practitioner • Extension worker • Environment officer • Public relations officer/spokesperson • Medical doctor/practitioner/physician The following categories are suggested to track progress of the achievement of this indicator. • Identified - occupations or functions are identified according to the needs • Partially identified - occupations or functions according to the needs have not been identified completely/comprehensively • Not yet identified - occupations or functions have not been identified according to the needs
Calculation	N/A
Disaggregation	Geographical distribution of the identified workforce occupations (e.g. national, regional, province). Sectors of the identified functions and occupations: animal health, human health, environment, wildlife, other.
Baseline	The baseline to be set by the country. This qualitative indicator involves categories of measurement (categorized as “identified”, “partially identified” and “not yet identified”) to monitor the progress of achieving this indicator. These categories are based on the evidence that workforce functions and occupations are identified across sectors. The baseline status, which falls within one of these three categories, reflects the current situation at the start of the monitoring process, typically within a specified period (e.g. the current year). Example: The baseline indicates that occupations and functions are “not yet identified” for the workforce to address disease X (e.g. in the current year). The country does not have any official documentation for national-level human resources detailing available occupation titles and their current associated functions.
Target	Target (the expected/planned value of an indicator) to be set by the country. For this qualitative indicator and its three categories of measurement, this target is contingent on the anticipated progress in achieving the indicator, which involves the identification of workforce functions and occupations required across various sectors. Example: The target is to have occupations and functions “identified” for the workforce to address disease X in all provinces by the year XXXX.
Reporting frequency	Annual, biannual.

Unit of measure	Workforce functions and occupations (categorized as "identified", "partially identified" and "not yet identified").
Means of verification	Organogram, list, reports, plan, strategy, WFD OT list of occupations, official national workforce/human resource documents.
Limitations/consideration	The indicator does not measure the competence of persons fulfilling the functions and occupations. An additional indicator (e.g. proportion of personnel meeting minimum competency requirements to perform a particular job function) could be used to measure the competency aspect. The WFD OT also includes an exercise for analysis.

13 **CODE W3**	**Number of coordinated activities implemented to train, maintain and mobilize a workforce**
Result level: output **Application: specific**	
Explanation/justification	This indicator is intended to measure the number of activities coordinated to meet national workforce demand in addressing zoonotic diseases. It also reflects labour market strategies to tackle unemployment, maldistribution and inefficiencies, aiming to best meet national needs.
Relevant technical area	Workforce development.
Definition of key terms	Coordinated activities: Activities to address a health threat at the human–animal– environment interface based on collaboration, communication, and coordination across all relevant sectors and disciplines, with the goal of achieving optimal health outcomes for both people and animals, while safeguarding the environment. Train: To give individuals the knowledge, skills, and abilities they need to meet national and international workforce demands. It includes pre-service (before a person begins professional services or work) and in service (during professional services or work) programmes. Maintain: When the workforce is adequately recruited and employed across sectors to best meet national needs. Mobilize: Workforce is adequately and readily deployed or distributed across relevant sectors and geographical locations to best meet national needs. Workforce: Relevant functions and occupations across multiple disciplines and sectors at the human–animal– environment interface to jointly address zoonotic diseases. Includes but is not limited to students and staff of schools and universities, technical professionals, policymakers, paid and unpaid community leaders or workers in the government, non-governmental, academic and private sectors.
Calculation	Total number of coordinated activities to train, maintain and mobilize workforce.
Disaggregation	Sectors: animal health, human health, environment, wildlife, other. By action: train, maintain, mobilize. Technical area: planning and preparedness; surveillance and information sharing; laboratory; investigation and response; risk reduction; risk communication and community engagement; workforce development; multisectoral coordination mechanisms. Institution responsible for implementation: government, private, academia, professional association.

Baseline	Baseline to be set by the country based on the identification of coordinated activities implemented for workforce development at the start of the monitoring process within a specific timeframe. In case activities are already being implemented, retrospective analysis is recommended based on a timeframe. For establishing a baseline, countries should consider. evaluating historical data regarding coordinated activities aimed at training, maintaining and mobilizing the workforce related to zoonotic diseases. Factoring in activities from different sectors and distinguishing them based on their primary focus (e.g. by action – train, maintain or mobilize; or by technical area – planning and preparedness, surveillance and information sharing, laboratory, and so on). Example: Five coordinated workforce development activities implemented during the previous year.
Target	Target (the expected/planned value of an indicator) to be set by the country based on the number of coordinated activities to be implemented, which may occur after the monitoring process has already begun. Example: Seven coordinated workforce development activities expected to be implemented by the year XXXX.
Reporting frequency	Semi-annual, annual, biannual.
Unit of measure	Activities (number).
Means of verification	Workforce development reports, strategy and plan, joint and sector-specific training lists, One Health curriculum, One Health training.
Limitations/consideration	Gathering data for this indicator may be a challenge due to a wide range of different sources relevant to actions and activities implemented for One Health workforce development. It is recommended to check availability and limit to only accessible, attainable and reliable data sources prior to establishing this indicator. In addition to the number of activities, countries can also consider quality, for example the quality of the technical materials, the diversity of sectors involved in the development and as beneficiaries, gender inclusion and equity, etc.).

14 CODE M1	**Demonstrated evidence for coordination functions by MCM**
Result Level: Outcome **Application: specific**	
Explanation/justification	This is an outcome indicator, requiring evidence to demonstrate that coordinated functions by MCM (e.g. One Health Platform or similar group) facilitate effective zoonotic disease management. This indicator with its supporting evidence should permit for regular review and assessment of overall efficacy of multisectoral, One Health approach to the management of zoonotic disease events.
Relevant technical area	MCM.

Definition of key terms	Demonstrated evidence for this indicator can include a wide range of documents, such as assessments and peer reviews, case studies, significant stories of change, and reports relating to MCM coordinated functions that demonstrate how this multisectoral group enables an effective coordinated zoonotic disease management. Coordinated functions refer to the role of MCM or similar group in the organization of the activities with different components to enable relevant sectors to work together effectively.
Calculation	N/A
Disaggregation	N/A
Baseline	The baseline to be set by the country should be grounded in evidence that demonstrates the multisectoral coordination at the onset of the monitoring process, typically within a specified period (e.g. the previous year). Example: List out the names, owners, and details of key evidence documents, reports or case studies that demonstrate the current effectiveness of coordinated functions by MCM during the previous year. As this entails qualitative data, it is advisable to review the content and quality of these key evidence documents to ascertain their relevance and accuracy. The baseline can encompass: Resource mobilization aspects as a function of MCM. Example: Reports that demonstrate the funding sources (or amount) mobilized by the country's One Health Platform to an X number of relevant stakeholders during a zoonotic disease outbreak during the previous year. Information sharing aspects as a function of MCM. Example: Documentation on the effectiveness of the MCM during an onset of zoonotic disease events to gather multisectoral stakeholders for a meeting. Coordination aspects as a function of MCM. Example: SOPs or documents, coordinated by MCM that address multisectoral zoonotic disease management.
Target	Target (the expected/planned value of an indicator) to be set by the country within a specific timeframe. In the case of this qualitative indicator, the target is based on the anticipation of an enhanced MCM coordination capacity that will be achieved to improve effectiveness of zoonotic disease management. Example: Demonstration of increased effectiveness of MCM's coordination functions. The target can encompass: An updated list of key evidence documents demonstrating increased effectiveness of coordination functions during the programme's duration. Example: assessment reports of multisectoral coordination in zoonotic disease management, demonstrated by the MCM's coordination functions. An updated list of key evidence documents demonstrating enhanced capacity of resource mobilization. Example: Case studies, publications, reports highlighting the ability of MCM to mobilize funds more effectively for One Health-related activities. Detailed records showcasing the coordination functions by MCM in real-time zoonotic disease situations. These documents should elaborate on the execution strategies, involvement of different sectors and outcomes. Example: An after-action review report highlighting the capability of MCM and its ability to convene stakeholders, facilitating comprehensive situation analysis and developing prevention and control measures in a limited amount of time, as a strength in successful coordinated response.

Reporting frequency	Annual.
Unit of measure	Qualitative measure comprising list of documents, information on reviews/ assessments undertaken, study, research, peer-reviews.
Means of verification	Different documents, such as assessments, reviews, research, case studies, reports relating to demonstrating the multisectoral, One Health approach through MCM coordination functions.
Limitations/consideration	This indicator is a qualitative measure that requires careful interpretation. The availability of documented evidence may not necessarily translate into effective and sustainable coordination in the management of zoonotic diseases. As such, further consideration should be given to: • How well any coordinated functions have been implemented in practice • The likely impact on the relevant sectors and institutions • Efforts to ensure sustainability of coordinated functions, across sectors and geographies (e.g. at the subnational level)

15 **CODE P1**	**Demonstrated evidence for joint management and operational infrastructure for effective coordinated planning and preparedness to zoonotic disease events**
Result level: outcome **Application: specific**	
Explanation/justification	This is an outcome indicator, requiring evidence to demonstrate sufficient planning and preparedness for a multisectoral, One Health approach to: Overall management of zoonotic disease events; and Systems to support sharing or coordinating operational infrastructure to respond to zoonotic disease events, when required. This indicator and its supporting evidence should permit for regular review and assessment of overall efficacy of a multisectoral, One Health approach to the planning and preparedness to zoonotic disease events.
Relevant technical area	Planning and preparedness.
Definition of key terms	Demonstrated evidence for this indicator may include plans, SOPs, assessments, research, case studies, significant stories of change and produced incident reports that incorporate all sectors involved in the individual zoonotic disease incident. These documents and reports may include evidence of successful coordinated planning and preparedness. Joint management: This refers to the joint coordination and management of resources and responsibilities pertaining to the mitigation of, preparedness for, response to and recovery from a zoonotic disease event. Operational infrastructure: This refers to physical and organizational structures and facilities, incorporating all relevant sectors to be activated in case of a zoonotic disease emergency or event. Examples include coordinated clear chain of command with designated roles and responsibilities, communication processes in place in case of emergency, mechanisms for collaboration, personal networks and information sharing protocols developed during the preparedness phase, emergency operations centre or response committees, incident management system (or incident command system) or equivalent structures, etc. Effective coordinated planning and preparedness are a comprehensive and well-coordinated approach to ensuring the country is ready to manage and respond effectively to zoonotic disease events or emergencies. “Effective” refers to the degree to which something successfully achieves its intended goals or produces the desired results.

Calculation	N/A
Disaggregation	N/A
Baseline	The baseline to be set by the country should be grounded in evidence that demonstrates existing joint management and operational infrastructure at the onset of the monitoring process, typically within a specified period (e.g. the previous year). Example: List the existing key documents, assessments, protocols, and/or reports that demonstrate the state of joint management and operational infrastructure during the previous year. As this indicator entails qualitative data, it is advisable to review the content and quality of these key evidence documents to ascertain their relevance, quality and accuracy.
Target	Target (the expected/planned value of an indicator) to be set by the country within a specific timeframe. In the case of this qualitative indicator, the target is based on the anticipation of an enhanced joint management and operational infrastructure that will be achieved. Example: Demonstration of the improvement of joint management and operational infrastructure enabling an effective coordinated zoonotic disease planning and preparedness by the year XXXX. The target can encompass: Development and update of documents, operational plans, research, case studies, SOPs, protocols, and reports demonstrating evidence of joint management and operational infrastructure. Examples: A manual for incident management system created in the year XXX was updated to include a clear chain of command with designated roles and responsibilities and emergency communication processes across One Health sectors. Periodic review conducted and necessary updates and refinements are made to improve and align the guidance documents and strategies based on evolving needs and challenges. Examples: Updated joint SOPs for coordinated preparedness, detection and response across sectors.
Reporting frequency	Semi-annual or annual.
Unit of measure	Qualitative measure – list of documents (e.g. plans, peer-reviews (qualitative measure), reports), information on reviews/assessments undertaken, study, research.
Means of verification	Plans, SOPs, assessments, reviews, research, case studies, reports relating to demonstrating the multisectoral, One Health approach to planning and preparedness.
Limitations/consideration	This outcome indicator is a qualitative measure that requires careful interpretation. The availability of documented evidence will not necessarily translate into an effective and sustainable multisectoral, One Health approach to planning and preparedness for response to zoonotic disease events. Most important here will be evidence to show how joint management and operational structure have facilitated effective planning and preparedness for zoonotic disease events. This indicator is intended to be used for planning and preparedness of emerging zoonotic diseases but may not be applicable to endemic zoonotic diseases.

16 CODE IR1	**Proportion of zoonotic disease events for which timeliness metrics were used to drive performance improvement process throughout the investigation and response**
Result level: outcome **Application: specific**	

Explanation/justification	This indicator intends to measure how timeliness metrics are used to drive performance improvement for zoonotic disease outbreak response (for example, WHO Early Action Review EAR guidance (World Health Organization, 2023) which advocates (as general guidance) for seven days to detect, one day to notify, and seven days for early response actions). Using timeliness metrics for performance improvement, whether early- intra- or after-action review, requires an approach that establishes clear performance targets, quantifies variations in performance, identifies factors responsible for variations, and uses information to support performance improvement. Monitoring timeliness metrics can be used to evaluate trends and identify improvements in detection and response capabilities. (Impouma et al., 2020) (Bochner et al., 2023).
Relevant technical area	Investigation and response.
Definition of key terms	Zoonotic disease event (from TZG): An occurrence of a zoonotic disease, including an outbreak, epidemic, or pandemic in people or animals. May or may not refer to a single or small number of clinical cases or detected zoonotic disease infections, depending on the hazard and the circumstances. Timeliness metrics: The time interval between outbreak milestones. Calculating timeliness metrics: The number of days between recorded event metrics can be calculated for outbreaks: Detection (dates between emergence and detection) Notification (dates between detection and notification) Multisectoral notification (dates between detection and multisectoral notification). Response (dates between notification and initiation of coordinated or joint response action). For these metrics, timeliness parameters (e.g. timeframes for good, acceptable or poor timeliness) should be developed based on global standards (e.g. WHO Early Action Review guidance) with consideration given to context specific adaptation. Performance improvement process: An approach using metrics to evaluate timeliness and quality of activities throughout the investigation and response that result in improvements to workflows and actions. When repeated consistently, this establishes the habit of ensuring there is continual learning and improvement from every event.
Calculation	Step 1: The proportion of reported zoonotic disease events that collected timeliness metrics. Numerator: The number of zoonotic disease investigation and responses for which timeliness metrics were collected. Denominator: The number of zoonotic disease events reported for which coordinated investigation and response were performed. Step 2: The proportion of zoonotic disease events for which timeliness metrics were used to drive performance improvement process throughout the investigation and response. Numerator: The number of zoonotic disease events for which timeliness metrics were used to drive performance improvement throughout the investigation and response. Denominator: The number of zoonotic disease investigation and responses for which timeliness metrics were collected.
Disaggregation	Sectors: animal health, human health, environment, wildlife, other Disease type

Baseline	Baseline to be set by the country, based on the proportion of recorded zoonotic disease events that collected timeliness metrics, and for those, the proportion that used timeliness metrics to drive performance improvement at the start of the monitoring process within a specified period (e.g. the current year). The baseline can be established by the following steps: Determine the number of zoonotic disease events reported for which coordinated investigation and response were performed. Determine the number of investigations and responses that collected timeliness metrics. Number of investigations and responses for which timeliness metrics were collected and used to drive performance improvement (e.g. completion of an early action review or other performance improvement tool). Example: in the current year, among the ten outbreaks that were investigated and responded to, 20 percent (equating to two outbreaks) gathered timeliness metrics. Of these two outbreaks, 50 percent (meaning one outbreak) employed the WHO Early Action Review guidance (or a similar approach) to enhance performance improvement. Countries that are not routinely collecting timeliness data may choose to only record a baseline as the proportion of outbreaks investigated and responded where timeliness metrics were collected. In future years, they can focus on using the timeliness data for performance improvement.
Target	Target (the expected/planned value of an indicator) to be set by the country. This should be based on the expected utilization of timeliness metrics to drive performance improvement for outbreak response. Example: 100 percent of outbreaks investigated and responded to will collect timeliness metrics, of which at least 50 percent will use timeliness metrics to drive performance improvement by the year XXXX. Considering ten outbreaks investigated and responded to, timeliness data is expected to be collected for all ten outbreaks. Of those outbreaks where timeliness data was collected, five are expected to use the WHO Early Action Review guidance (or similar) to drive performance improvement by the end of the target year.
Reporting frequency	Semi-annual.
Unit of measure	Zoonotic disease events (percent).
Means of verification	National and/or subnational reports, data notified to WHO or WOAH, investigation summaries or after- action reviews, surveillance reports/ summaries, academic institution documents (e.g. dissertations) or other documentation of zoonotic event investigations and responses.
Limitations/consideration	Metrics for outbreak response should always be contextualized for the specific pathogen and used to drive performance improvement. The WHO Early Action Review guidance provides a stepwise approach for using metrics to identify bottlenecks and enablers for performance improvement. This indicator can be used to measure the routine use of timeliness metrics to drive performance improvement for endemic or emerging zoonotic diseases. In order to assess this indicator, the country will need to collect timeliness metrics for each zoonotic disease event.

17 CODE IR2	**Joint (rapid) response team roster is shared and mobilized across sectors**
Result level: output **Application: specific**	
Explanation/justification	The availability of fully trained personnel to manage all aspects of zoonotic disease emergencies improves command in the field and response coordination at the subnational and national levels. Staff from all sectors, especially those who will be called on to implement the response together, are trained together through programmes developed and implemented using a multisectoral, One Health approach. They are prepared for mobilization during an emergency response. This indicator is intended to measure the availability of a prepared joint (rapid) response team and its mobilization across sectors during zoonotic disease emergency response.
Relevant technical area	Investigation and response.
Definition of key terms	Joint rapid response team roster: A document or platform with relevant variables (e.g. roles and responsibilities, years of experience, etc.) that identifies trained staff from all sectors who will be called on to jointly implement the response. They are trained together through programmes developed and implemented using a multisectoral, One Health approach, and are therefore considered a multisectoral team prepared to be mobilized during an emergency response. Shared: The joint (rapid) response team roster is accessible to all relevant sectors Mobilized: This refers to the deployment assignment according to needs of emergency response event. This indicator requires an assessment and interpretation of whether the joint (rapid) response team roster is available (shared) and is mobilized. The following categories are suggested to track progress of this indicator achievement: Development of roster and agreement across the sectors Recruitment of rapid response team members Joint roster is shared and ready for activation/deployment Joint rapid response team selected from the roster and mobilized during an outbreak
Calculation	N/A
Disaggregation	Sectors: animal health, human health, environment, wildlife, other.
Baseline	The baseline to be set by the country. This qualitative indicator involves five categories of measurement (categorized as (a) “Development of roster and agreement across the sectors”; (b) “Recruitment of rapid response team members”; (c) “Joint roster is shared and ready for activation/deployment”; and (d) “Joint rapid response team selected from the roster”). These categories are designed to assess the extent to which a joint rapid response team roster is shared and mobilized across sectors. The baseline status, which falls within one of these four categories, reflects the current situation at the start of the monitoring process, typically within a specified period (e.g. the current year). Example: A baseline status of “Recruitment of rapid response team members” (within the current year) would apply when there is an ongoing recruitment process for the members of the team during the current year. This exemplifies the type of baseline status that aligns with one of the five categories, offering a snapshot of the indicator’s starting point.

Target	Target (the expected/planned value of an indicator) to be set by the country. For this qualitative indicator and its five categories of measurement, the target is contingent on the expected progress of achieving this indicator, which hinges on the availability of fully trained personnel across sectors capable of managing and coordinating all aspects of zoonotic disease emergencies within and across sectors. This progress is anticipated to be achieved within a specific timeframe. Example: To achieve the status "Joint rapid response team is/was from the roster" (by the year XXXX). The target is that the joint rapid response team to be selected from the roster and mobilized by the year XXXX.
Reporting frequency	Semi-annual.
Unit of measure	Joint rapid response team roster (categorized as "Development of roster and agreement across the sectors", "Recruitment of rapid response team members", "Joint roster is shared and ready for activation/deployment" and "Joint rapid response team selected from the roster").
Means of verification	Documents to verify the existence, training and utilization of the joint rapid response team: list of staff members, contact information, skills, and training, joint training reports, deployment or after-action review reports by given emergency.
Limitations/consideration	This indicator requires an assessment and interpretation of whether the joint rapid response team roster is available and mobilized. It does not reflect the quality and efficiency of the team's deployment or whether the roster is updated accordingly. This indicator is intended to be used for investigation and response of emerging zoonotic diseases but may not be applicable to endemic zoonotic diseases.

18 CODE IR3 **Result level: output** **Application: specific**	**Proportion of zoonotic disease events that are evaluated using a decision tool/process**
Explanation/justification	In order to support timely action after a zoonotic event has been identified, situational assessment conducted by all relevant sectors working together is needed to determine the actions necessary, the scale of those actions and sectors/actors that should be involved. The situation assessment tool should be endorsed by all relevant sectors before an event occurs. Rapid and consistent response to a zoonotic disease event is facilitated by using a decision tool. This indicator is intended to measure whether a tool or process has been developed, is endorsed by all relevant sectors and is indeed being utilized. Use of such decision guiding tools or processes is one indication of the progress in the adoption of multisectoral, One Health approaches at the national and subnational levels in a country.
Relevant technical area	Investigation and response.
Definition of key terms	Zoonotic disease event (from TZG): This is an occurrence of a zoonotic disease, including an outbreak, epidemic, or pandemic in people or animals. It may or may not refer to a single or small number of clinical cases or detected zoonotic disease infections, depending on the hazard and the circumstances. Decision tool/process: This is a decision tool or process that can be used to determine the consequence (e.g. high, low, negligible) and the need for a response to a zoonotic disease event, based on available information from investigations, risk assessments, surveillance data, etc. Where necessary, it helps determine the scale and nature (sector-specific or multisectoral, One Health) of a required response. It may take a variety of forms, including a decision tree, algorithm or scored checklist. Moreover, the tool should be endorsed by all relevant sectors before an emergency occurs.

Calculation	Numerator: The total number of zoonotic disease events which are evaluated using a decision tool or process (endorsed by relevant sectors). Denominator: The total number of zoonotic disease events.
Disaggregation	Disease type.
Baseline	Baseline to be set by the country, based on the proportion of zoonotic diseases that are evaluated using a decision tool/process at the start of the monitoring process within a specified period (e.g. the current year). Baseline can be established through the assessment of reports to international organizations (e.g. WHO, WOAH) or other documentation of zoonotic events and responses at the national and/or subnational level. These can be used to determine the proportion of those events for which any kind of decision-making process was utilized to determine the scope (with respect to sectors involved) and scale (with respect to degree of investigation or response that was implemented) of the response. It is recommended to conduct such a background assessment to determine the baseline level of application of this process. Example: 50 percent during the current year. (Four reported zoonotic disease events, two of them used a decision tool/process: 2/4 ([50 percent]).
Target	Target (the expected/planned value of an indicator) to be set by the country, within a specific timeframe. This should be based on the expected improvement in the utilization of a decision tool/process among zoonotic diseases events. Example: 100 percent by the year XXXX. (considering four zoonotic diseases events, the aim is to use a decision tool/process for four of them by the end of the target year: 10/10 [100 percent]).
Reporting frequency	Semi-annual or annual.
Unit of measure	Zoonotic disease events (percent).
Means of verification	National and/or subnational reports, investigation summaries, academic institution documents (e.g. dissertations) or other documentation of zoonotic event investigations and responses.
Limitations/consideration	Use of decision support tools or processes does not alone indicate the adoption and implementation of multisectoral, One Health approaches; individual objective retrospective evaluation of the reports or other documentation should be conducted to determine the quality of the use and outcomes, and the degree to which multisectoral, One Health engagement occurred in the decision-making process and effectively identified the scope and scale necessary for the particular event. This indicator is intended to be used for the investigation and response of emerging zoonotic diseases, and may not be applicable to endemic zoonotic diseases.

19 **CODE IR4**	**Proportion of zoonotic disease events that have joint/coordinated investigation and/or response**
Result level: output **Application: specific**	
Explanation/justification	This indicator measures the degree to which multisectoral, One Health approaches are implemented in a country for zoonotic events and improvements in the use of these approaches over time. Taking a multisectoral, One Health approach to the development and implementation of zoonotic disease investigations and responses allows for joint, or parallel but coordinated, aligned, and comprehensive actions across all relevant sectors. This leads to better health outcomes for both people and animals. The CIR OT offers references and operational approaches to organize joint investigation and response to zoonotic disease events.

Relevant technical area	Investigation and response.
Definition of key terms	Zoonotic disease event (from TZG): An occurrence of a zoonotic disease, including an outbreak, epidemic or pandemic in people or animals. It may or may not refer to a single or small number of clinical cases or detected zoonotic disease infections, depending on the hazard and the circumstances.
Calculation	Numerator: The number of reported zoonotic disease events for which a joint or coordinated multisectoral, One Health investigation and/or response is implemented. Denominator: The number of zoonotic disease events.
Disaggregation	Type of activity: For example, joint/coordinated investigation only, joint/coordinated response only, joint/coordinated investigation and response. Sectors involved in the joint/coordinated investigation and/or response: animal health, human health, environment, wildlife, other.
Baseline	Baseline to be set by the country, based on the proportion of zoonotic diseases that have joint/coordinated investigations and/or responses at the start of the monitoring process within a specified period (e.g. the current year). Baseline can be established through assessment of the number of zoonotic events reported in a given period, including data reported to WHO in accordance with International Health Regulations (IHR) (2005) or to WOAH to determine the proportion of those events for which any kind of joint or coordinated multisectoral, One Health investigation and/or response was implemented. It is recommended to conduct such a background assessment to determine the baseline level. Additional baseline information can be obtained through assessment of reports or other documentation of zoonotic events and responses at the national and/or subnational level. Example: 40 percent during the current year. (out of five reported zoonotic disease events, two of them had joint/coordinated investigation and/or response: 2/5 [40 percent])
Target	Target (the expected/planned value of an indicator) to be set by the country within a specific timeframe. This should be based on the expected progress in the implementation of joint/coordinated investigation and/or response for zoonotic diseases events. Example: 100 percent by the year XXXX. (considering five zoonotic diseases events, the aim is to implement a joint/coordinated investigation and/or response for five of them by the end of the target year: 5/5 [100 percent])
Reporting frequency	Semi-annual or annual.
Unit of measure	Zoonotic disease events (percent).
Means of verification	National and/or subnational reports, investigation summaries, academic institution documents (e.g. dissertations) or other documentation of zoonotic disease event investigations and responses.
Limitations/consideration	This indicator is intended to be used for investigation and response of emerging zoonotic diseases, may not be applicable to endemic zoonotic diseases.

20 CODE J1	Number of activities implemented for zoonotic diseases based on joint risk assessment (JRA) recommendations.
Result level: outcome **Application: specific**	
Explanation/justification	This indicator is intended to measure the utilization of JRA results/outcomes to implement risk reduction and risk communication activities in the preparedness, control and response to zoonotic diseases.
Relevant technical area	Joint risk assessment.

Definition of key terms	Activities: These are evidence-based risk reduction and risk communication activities based on recommended risk management options generated from JRA conducted by all relevant sectors at the human–animal–environment interface.
Calculation	Total (sum) of number of activities implemented based on JRA recommendations
Disaggregation	Type of activities: specific: risk communication, risk reduction options, community engagement activities and interventions, coordinated surveillance general: training, overall guidance, assessment of communication needs, review of plans/policies/strategies, etc.
Baseline	Baseline to be set by the country. It is established by identifying the activities that have been implemented based on JRA recommendations at the onset of the monitoring process. This baseline assessment typically pertains to a specific timeframe, such as the current year, providing an initial snapshot of the indicator's starting point. Example: Two risk reduction and risk communication activities implemented for this year based on JRA conducted.
Target	Target (the expected/planned value of an indicator) to be set by the country within a specific timeframe. This target is based on the anticipated progress in utilizing JRA results/outcomes to implement risk reduction and risk communication activities in preparedness, control and response of zoonotic diseases. Example: Five risk reduction and risk communication activities expected to be implemented for next year based on JRA to be conducted for next year.
Reporting frequency	Annual.
Unit of measure	Activities (number).
Means of verification	Report of the JRA(s) Reports of the activities implemented to address the JRA recommendation JRA(s) official communication materials (e.g. press releases with verified statements, donor reports, etc.).
Limitations/consideration	JRA working group or MCM or similar One Health multisectoral group will be required to monitor the implementation of activities related to JRA recommendations.

21 CODE J2	**Number of professionals trained to conduct joint risk assessment (JRA)**
Result level: output Application: specific	
Explanation/justification	It is intended to measure the capacity building at national and subnational levels to apply JRA.
Relevant technical area	Joint risk assessment.
Definition of key terms	Professionals: This includes staff or personnel trained to conduct JRA (e.g. facilitators, technical team). Trained: This is achieved through JRA training.
Calculation	Total (sum) number of professionals trained to conduct JRA.
Disaggregation	By sector, gender, occupations (roles and capacities), functions (actions and activities).

Baseline	Baseline to be set by the country, and it is determined by identifying the JRA trainings conducted, and the corresponding professionals trained at the onset of the monitoring process within a specific timeframe, such as the current year. Example: 20 professionals trained during the JRA conducted in the current year.
Target	Target (the expected/planned value of an indicator) to be set by the country within a specific timeframe. It is based on the number of expected professionals to be trained to conduct JRA, which may occur after the monitoring process has already begun. Example: 50 professionals are expected to be trained for next year, with 2 JRAs planned, each with 25 participants. This target provides a clear quantitative goal for the indicator's achievement.
Reporting frequency	Annual.
Unit of measure	Professionals (number).
Means of verification	Report of the JRA training/workshop with list of trainees. Report of JRAs conducted. Official list of JRA facilitators and participants.
Limitations/consideration	The increase in the number of trained professionals does not mean that this trained workforce is applying JRA. In some instances, not all trained JRA professionals are involved in subsequent JRAs due to roles and responsibilities and the limited number of JRAs conducted. In other words, this does not reflect how they are involved in the JRA process to improve the utilization and quality of JRAs conducted in a country.

22 **CODE S1** **Result level: outcome** **Application: specific**	**A coordinated surveillance and information sharing systems (SIS) for zoonotic diseases is established at national level/piloted**
Explanation/justification	This indicator is intended to measure if the country's objective developing systems for One Health, coordinated surveillance for zoonotic diseases has been achieved at the subnational level, or national level or in a pilot. SIS OT offers an approach for countries to develop or strengthen a multisectoral coordinated surveillance system.
Relevant technical area	Surveillance and information sharing.
Definition of key terms	Coordinated surveillance and information sharing system (from SIS OT): The platform or system that allows for the collection, aggregation and analysis of surveillance elements across multiple sectors collaborating at the human–animal–environment. interface, to enable them to effectively work together towards their aligned objectives and goals. The following categories are suggested to track progress of this indicator achievement: Established indicates that the SIS is in place, functional and meeting the country-specific objectives for coordinated surveillance and information sharing. Partially established indicates the presence of a structured process, whether formal or informal, for exchanging surveillance data and/or information between sectors. However, this does not imply the existence of a formalized and fully operational system. Not yet established indicates the absence of any coordinated systems (SIS) or process, formal or informal, for surveillance and information sharing. Piloted indicates an initial small-scale implementation of a SIS that is used to test/prove the viability of the system.

Calculation	N/A
Disaggregation	Geographical (pilot) area. Disease. Sectors: animal health, human health, environment, wildlife, other. Regulatory status: informal, formal, other. Responsible governance structure: MCM, committee, institutional body, group.
Baseline	Baseline to be set by the country, within a specific timeframe. This qualitative indicator involves categories of measurement (categorized as "Established"; "Partially established"; "Not yet established"; and "Piloted") to monitor the progress of achieving this indicator. These categories are based on the evidence of the development of systems for One Health, coordinated surveillance for zoonotic diseases. The baseline status, which falls within one of these four categories, reflects the current situation at the start of the monitoring process, typically within a specified period (e.g. the current year). Example: A baseline status of "Not yet established" (within the current year) applies when there is no formal or informal coordinated SIS established or piloted. This exemplifies the type of baseline status that aligns with one of the four categories, offering a snapshot of the indicator's starting point.
Target	Target (the expected/planned value of an indicator) to be set by the country, within a specific timeframe. For this qualitative indicator and its four categories of measurement, this target is contingent on the anticipated progress in achieving the indicator, which involves the establishment of a One Health, coordinated SIS that meets the country-specific needs and objectives for zoonotic disease surveillance. Example: Achieve the status of "Partially established" (by the year XXXX). The target is to establish a process to share surveillance data and/or information between sectors, but not necessarily utilizing a formal and functional system by the targeted year XXXX.
Reporting frequency	Annual.
Unit of measure	Coordinated surveillance and information sharing systems (SIS) (categorized as "established"; "partially established"; "not yet established"; and "piloted")
Means of verification	Documented evidence of coordinated surveillance and information sharing: e.g. any documents, reports, or communications generated through systematic collection, coordination and communication of data and information between relevant sectors; outputs from aggregated surveillance data, etc.
Limitations/consideration	This outcome indicator is a qualitative measure that requires careful interpretation. The availability of documented evidence of coordinated surveillance used as a means of verification will not necessarily demonstrate its effectiveness, functionality, sustainability, or the progress of its development and strengthening. For this indicator, the country should have well-defined objectives and expected outputs for the coordinated surveillance system to use as a reference for measuring its progress status.

23 **CODE S2**	**Proportion of priority zoonotic diseases for which quality surveillance data are shared with relevant sectors**
Result level: output **Application: specific**	
Explanation/justification	This is an output indicator that provides a broad understanding of the extent to which quality disease surveillance data have been shared across sectors to facilitate effective zoonotic disease management.
Relevant technical area	Surveillance and information sharing.

Definition of key terms	Priority zoonotic diseases: These are the zoonotic diseases of greatest concern that should be jointly addressed by human health, animal health and environment sectors in a country or region. Prioritizing such diseases should follow a multisectoral, One Health approach. Quality data: This refers to information collected through surveillance systems with accuracy, completeness, timeliness and reliability that allows for interpretation of disease status. Relevant sectors/disciplines/stakeholders/ministries: (from the TZG): At a minimum, those sectors, disciplines, stakeholders or ministries that are key to the specific health threat to be addressed using a multisectoral, One Health approach. Other sectors and agencies that are stakeholders of the health threat (e.g. private stakeholders, academia), may be included as needed.
Calculation	Numerator: The number of priority zoonotic diseases for which quality data are shared across sectors. Denominator: The total number of priority zoonotic diseases identified by the country.
Disaggregation	- Sectors: animal health, human health, environment, wildlife, other.
Baseline	Baseline to be set by the country based on the extent disease information has been shared across sectors to facilitate effective zoonotic disease management at the start of the monitoring process within a specific timeframe (e.g. previous year). Example: 40 percent. (Out of five priority zoonotic diseases, for two of them quality data has been shared among relevant stakeholders in the previous year: 2/5 [40 percent]).
Target	Target (the expected/planned value of an indicator) to be set by the country within a specific timeframe. This should be based on the proportion of priority zoonotic diseases that quality data are intended to be shared among relevant stakeholders, which may occur after the monitoring process has already begun. Example: 80 percent. (out of five priority zoonotic diseases, four are expected to have shared data among relevant stakeholders by year XXXX: 4/5 [80 percent]).
Reporting frequency	Annual or semi-annual.
Unit of measure	Priority zoonotic diseases (percent).
Means of verification	Examples include: • Emails sent/generated • Coordination meeting reports • Situational reports • Documentation of the use of an interoperable or joint platforms for systematic surveillance data exchange
Limitations/consideration	Data quality may differ from country to country. It is up to each country to define the criteria of data quality to sufficiently provide information to interpret the disease situation. The “relevant sectors” should be identified according to the context (e.g. particular country and disease) and may be different for each disease. Caution should be taken during calculation and interpretation when data do not fit all criteria to meet certain quality, or when information is shared with some but not all stakeholders. Cut-offs may need to be assigned. For example: Data quality is met when 80 percent of all criteria is fulfilled. Data are considered shared with relevant stakeholders when more than 80 percent of people on the list of a disease-specific committee/identified group of people receive the particular information.

24 CODE R1 Result level: output Application: specific	**Number/list of identified and engaged stakeholders from relevant sectors for risk reduction, risk communication and community engagement**
Explanation/justification	A multisectoral, One Health approach requires that relevant stakeholders are identified and engaged to ensure that all perspectives are represented. Effective risk reduction and risk communication rely on stakeholders from all relevant sectors and disciplines working together with One Health technical and policy experts, sharing information and their opinions, and working with affected populations to identify risk factors and potential risk reduction practices. This indicator is intended to measure the number of stakeholders that are identified and engaged for risk reduction, risk communication and community engagement.
Relevant technical area	Risk reduction, risk communication and community engagement.
Definition of key terms	Identified refers to the identification of relevant stakeholders through stakeholder mapping and analysis for a given objective or activity Engaged refers to stakeholders who have a formal or informal type of regular communication with the purpose of consultation and/or coordination Stakeholders (from TZG) refers to any individual or group that is or should be involved as a partner in preventing or managing zoonotic diseases. Stakeholders include those who impact, are impacted by or perceive themselves to be affected by zoonotic disease threats, including those who may be affected by measures to address zoonotic diseases. Relevant sectors/disciplines/stakeholders/ministries (from TZG): At a minimum, those sectors, disciplines, stakeholders, or ministries that are key to the specific health threat to be addressed using a multisectoral, One Health approach. Other sectors and agencies that are stakeholders to the health threat (e.g. private stakeholders, academia), may be included as needed. Risk reduction/risk mitigation (from TZG) refers to the identification and implementation of policies and activities designed either to prevent zoonotic disease agents from creating health risks or to lessen their frequency, distribution, intensity or severity. In practice, this typically refers to avoidance or decreasing current ongoing or future risk and/or impact. Risk communication (from TZG): The real-time exchange of information, advice and opinions among experts, community leaders or officials, and the people who are at risk or who have a direct influence on risk mitigation due to their practices or behaviour. Risk communication ensures that people and communities are aware of current threats and can be used to promote behaviours to reduce ongoing risks. Community engagement (from TZG) means that affected communities are consulted about and included in the response to risk reduction efforts for a zoonotic disease by taking into account in the communication the local social, cultural norms and beliefs, as well as the political and economic contexts and other realities.
Calculation	Total (sum) number of stakeholders identified/engaged, total (sum) number of list of stakeholders.
Disaggregation	Sectors: animal health, human health, environment, wildlife, other. Technical or topic area. Stakeholders: identified, engaged.
Baseline	Baseline to be set by the country based on identifying the number of stakeholders who have been identified and engaged for all or prioritized risk reduction, risk communication and community engagement activities at the start of the monitoring process, within a specific timeframe. Example: Three stakeholders in the current year were identified and engaged for rabies prevention and control activities at the start of the monitoring process. This baseline provides an initial assessment of the indicator's starting point.

Target	Target (the expected/planned level of an indicator value) to be set by the country within a specific timeframe. This should be based on the number, type and level of stakeholder engagement that is intended to take place. It is important to note that this engagement may occur after the monitoring process has already begun. Example: Two new stakeholders to be engaged in rabies prevention and control activities and added to the current list (baseline) of stakeholders by the end of the year XXXX. This target indicates the expectation that two new stakeholders will be engaged. This target provides a clear quantitative goal for the indicator's achievement.
Reporting frequency	Semi-annual or annual.
Unit of measure	Individual stakeholders (number, list).
Means of verification	Stakeholder mapping and analysis report. Risk reduction, risk communication and community engagement plans/ strategies, activities report Multisectoral One Health networks documentation (email, meeting notes, etc.)
Limitations/consideration	This indicator does not reflect the level of engagement and coordination by stakeholders.

25 CODE R2 **Result level: output** **Application: specific**	**Number of risk reduction/risk communication and community engagement activities jointly developed/implemented**
Explanation/justification	This indicator is intended to measure the joint development and coordinated delivery of risk reduction, risk communication and community engagement activities across stakeholders and affected populations to address zoonotic diseases.
Relevant technical area	Risk reduction, risk communication and community engagement.
Definition of key terms	Risk reduction/risk mitigation (from TZG): The identification and implementation of policies and activities designed either to prevent zoonotic disease agents from creating health risks or to lessen their frequency, distribution, intensity or severity. In practice, this typically refers to avoidance or decreasing current ongoing or future risk and/or impact. Risk communication (from TZG): The real-time exchange of information, advice and opinions among experts, community leaders, or officials and the people who are at risk or who have a direct influence on risk mitigation due to their practices or behaviour. Risk communication ensures that people and communities are aware of current threats and can be used to promote behaviours to reduce ongoing risks. Community engagement (from TZG): This means that affected communities are consulted about and included in the response to risk reduction efforts for a zoonotic disease by taking into account in the communication the local social, cultural norms and beliefs, as well as the political and economic contexts and other realities..
Calculation	Total (sum) number of risk reduction, risk communication and community engagement activities recommended and developed.
Disaggregation	• Priority zoonotic disease or event • Topic Area: risk reduction, risk communication, community engagement, prevention, control, response • Action: joint development, coordinated delivery/implementation

Baseline	Baseline to be set by the country based on risk reduction/risk communication and community engagement activities that were jointly developed and recommended at the start of the monitoring process, within a specific timeframe (e.g. current year). Example: Two activities were jointly developed and implemented in the current year (e.g. dog bite and management prevention outreach, along with an animal vaccination campaign in high-risk areas) for rabies prevention and control activities at the start of the monitoring process. This baseline provides an initial assessment of the indicator's starting point. This period should include when recommended activities were delivered or implemented.
Target	Target (the expected/planned value of an indicator) to be set by the country, within a specific timeframe. This should be based on the anticipated progress in jointly development and coordinated delivery of risk reduction, risk communication and community engagement activities. It is important to note that this timeframe may commence after the monitoring process has already begun. Example: Four jointly developed activities to be delivered by the end of the year XXXX for rabies prevention and control activities. For example, dog bite and management prevention outreach, along with an animal vaccination campaign in high-risk areas, training on preventive rabies treatment post-exposure, and engagement meetings for working collaboratively across border areas). This indicates the expectation that four activities will be implemented. This target provides a clear quantitative goal for the indicator's achievement.
Reporting frequency	Annual.
Unit of measure	Risk reduction, risk communication and community engagement activities (number).
Means of verification	Risk reduction, risk communication and community engagement strategy and plan, materials and resources, communication network/group reports and meetings, evaluation and feedback reports.
Limitations/consideration	The increase in the number of recommended activities reflects the multisectoral, One Health approach for developing and providing consistent information about measures. However, this does not mean that the adoption/utilization of recommended activities by communities has improved. See indicator 26.

26 **CODE R3** **Result level: outcome** **Application: specific**	**Proportion of implemented activities that are adopted by communities**
Explanation/justification	Providing people with the information they need to protect themselves and prevent harm to others allows them to reduce risks and contributes to an effective zoonotic disease response. This indicator is intended to measure the adoption by communities of appropriate measures received for risk reduction for zoonotic diseases involving animal, human and environmental factors.
Relevant technical area	Risk reduction, risk communication and community engagement.
Definition of key terms	**Implemented activities:** Risk reduction, risk communication and community engagement activities that are jointly developed and implemented with stakeholders and affected populations to a given community. **Adopted** refers to the acceptance, use, and integration of recommended activities by a given community. **Communities:** The target audience, which means the group of people who are at risk or who have a direct influence on risk mitigation due to their practices or behaviour.

Calculation	Numerator: total number of implemented activities which are adopted by communities. Denominator: total number of activities implemented for communities.
Disaggregation	Topic area: risk reduction, risk communication and community engagement, prevention, control, response. Zoonotic disease.
Baseline	The baseline to be set by the country, based on the proportion of appropriate measures developed, administered and adopted by communities for risk reduction in zoonotic diseases at the start of the monitoring process, within a specified period (e.g. the previous year). This period should include when the activities were delivered or implemented, and when these activities were adopted by the target communities. Example: 50 percent during the previous year. (indicates that two activities were implemented, and one of them was successfully adopted by the target community during the previous year: 1/2 (50 percent). This baseline provides an initial assessment of the indicator's starting point).
Target	Target (the expected/planned value of an indicator) to be set by the country within a specific timeframe. This should be based on the anticipated progress in developing, administering and adopting appropriate measures by communities for risk reduction in zoonotic diseases. It is important to note that this timeframe may commence after the monitoring process has already begun. Example: 100 percent by the target year XXXX (indicates the expectation that all of three activities to be implemented are expected to be adopted by the target community by the end of the target year XXXX: 3/3 (100 percent)). This target provides clear quantitative goals for the indicator's achievement.
Reporting frequency	Annual.
Unit of measure	Implemented activities (percent).
Means of verification	Risk reduction, risk communication and community engagement strategy and plan, materials and resources, communication network/group reports and meetings, evaluation and feedback reports.
Limitations/consideration	The proportion of adopted activities does not measure the effectiveness or impact of these activities in a given community. Quality of implemented activities is influenced by other processes such as joint risk assessment, engagement of relevant multisectoral stakeholders and communities, and effective communication. Parameters for calculating successful adoption should be specified at the time an activity is developed and will be specific and dependent on the activity.

27 **CODE I1**	**Direct change in units measured resulting from zoonotic disease prevention and control**
Result level: impact **Application: overarching**	
Explanation/justification	This impact indicator allows the direct measurement of the effects of One Health and zoonotic disease prevention and control strategies and actions by comparing measurable economic (e.g. livestock production units, export) or health (e.g. number of cases, mortality, days of hospitalization) units pre-and post-intervention. More than one unit of measure could be chosen (e.g. the number of exported commodities of animal origin and the number of zoonotic disease outbreaks (or groups of diseases).
Relevant technical area	All.

Definition of key terms	**Direct change:** The quantitative variation of the selected measurement unit, calculated by comparing the periods before and after the intervention or using a reference value. It can be positive or negative depending on the chosen unit of measurement. **Units measured:** This can include individuals (e.g. infected people or animals, number of exported live animals per species), events (e.g. number of outbreaks), or quantities (e.g. weight in tons of the exported commodities of animal origin, expenditures in the currency for the reimbursement of the live animals culled because of the zoonosis [es]). **Zoonotic disease prevention and control:** Any intervention carried out on the basis of the One Health strategy and targeted at a specific zoonotic disease or group of zoonoses. It can be carried out in all sectors and geographical areas or by sector or geographical area but must be a consequence of the One Health strategy.
Calculation	The calculation is the algebraic difference between the quantity of the selected measure unit after and before the intervention.
Disaggregation	According to the unit of measure, examples of disaggregation can be spatial (by region/area), by period, by animal species/type of production or by disease if the intervention includes several zoonoses.
Baseline	The baseline for this impact indicator should be determined by the country and is based on the unit measurement chosen, along with its corresponding value at the start of the monitoring process. It provides a starting point to assess the long-term effects of One Health and zoonotic disease prevention and control strategies. For example, if the intervention is meant to improve the surveillance of given zoonoses, and the chosen unit of measure is the number of outbreaks in humans of that zoonotic disease, the assessment could be: the value for the three years before the intervention (e.g. 2018–2020), that was, e.g. 24 outbreaks – on average 8 outbreaks per year, and the value of the three years intervention/action measured at the end of the period (e.g. 2021–2023), that is, e.g. 30 outbreaks in humans – average ten outbreaks per year, then the calculation is: **Difference from the baseline = post-intervention unit value (10) - baseline unit value (8) = +2 outbreaks/year** The monitoring process covers six years, pre- and post-intervention, and the results indicate an increase of two outbreaks per year during the intervention/action, the difference from the baseline. The baseline assessment provides the impact indicator's value at the starting point, which reflects the impact of the current and previous situation on the selected unit of measurement. It is essential to consider an appropriate period (e.g. a minimum of three years) to compare the intervention with the baseline, to assess the long-term impact and understand the trends in zoonotic disease outbreaks in humans. The historical context is crucial for evaluating the effectiveness of interventions and strategies over time.

Target	Target (the expected/planned value of an indicator) to be set by the country. The target value for the chosen impact indicator should be based on the anticipated long-term effects of zoonotic disease prevention and control interventions. It provides the direct change in the units of measurement selected, which should quantify the expected impact that countries strive to achieve. It is important to consider that measuring the effect attributable to the intervention may require several years. For example, if the baseline value for the chosen unit of measure calculated during a specified previous period of three years (e.g. 2021–2023) is ten outbreaks per year in humans, and the expected value is set at six outbreaks per year in humans, to be achieved after a specified intervention deployed during a period of three years (e.g. 2024–2026), the target calculation would be: **Target Calculation: expected unit value (6) - baseline unit value (10) =-4 outbreaks per year** This indicates an expected decrease of four zoonotic disease outbreaks per year in humans to be measured by the monitoring process (suitable timeframe 3–5 years; meaning that the target achievement is measured at the end of the 2024–2026 period). The target provides insight into the anticipated impact as a long-term effect of the strategies and interventions deployed. Including a comparison period of a minimum of three years after the intervention or monitoring process begins is crucial to assess long-term impact.
Reporting frequency	Annual or every 3–5 years.
Unit of measure	Depending on the selected unit measure, what is counted can be individuals (e.g. infected people or animals, number of exported live animals per species), events (e.g. number of outbreaks), or quantities (e.g. weight in tonnes of the exported commodities of animal origin, expenditures in the currency for the reimbursement of the live animals culled because of the zoonosis [es]).
Means of verification	The data for this indicator should come from an established data collection system (disease surveillance, mortality, economic data – exportation of commodities of animal origin or live animals, etc.). Only validated data should be used for the calculation of the indicator.
Limitations/consideration	The data for this indicator should come from an established data collection system (disease surveillance, mortality, economic data – exportation of commodities of animal origin or live animals, etc.). According to the selected unit measure, observing an apparent effect attributable to the intervention measures could require years. For the interpretation of the results, this aspect should be clarified. Another point to consider is the comparison with the “expected” value (target). This is important because, for example, the reference population may have decreased due to culling during previous outbreaks. Consequently, the number of outbreaks in animals could be smaller not solely due to the intervention, but also because the population itself is now smaller. Another consideration is related to changes in coverage/sensitivity/specificity of the data collection systems as a “side effect” of the intervention, which could reduce the underreporting thus apparently reducing the efficacy of the intervention, too.

28 CODE I2	**Direct change in State Party Self- Assessment Annual Reporting (SPAR) indicator levels (C12.1)**
Result level: impact **Application: overarching**	
Explanation/justification	State parties are required by the International Health Regulations (IHR, 2005) to develop certain minimum capacities to prevent, detect, and respond to public health threats. Countries report annually their level of IHR Compliance through the State Party Self-Assessment Annual Reporting Tool (SPAR) (2021). The tool covers 15 capacities, each of which consists of 1 to 5 indicators, with a total number of 35 indicators. This impact indicator is intended to measure the improvement of SPAR indicator 12.1 and capacities resulting from the implementation of multisectoral, One Health best principles and practices to address zoonotic diseases. Capacity 12. Zoonotic diseases. Indicator C12.1 One Health collaborative efforts across sectors on activities to address zoonotic diseases. The SPAR tool has evolved over time, including its capacities and related indicators. For example, indicator C12.1 of SPAR version 2 (2021) slightly differs from its former indicator C3.1 of SPAR version 1 (2018). Therefore, to ensure that similar indicators are compared, it is currently recommended to set your baseline year based on SPAR version 2 (i.e. year 2021).
Relevant technical area	All.
Definition of key terms	Direct change: Quantifiable variation (from the 1 to 5 scale) in SPAR indicator levels (C12.1).
Calculation	Direct change calculation = achieved level - baseline level of SPAR indicator (within a given timeframe).
Disaggregation	N/A
Baseline	The baseline level is determined by the country based on the SPAR indicator C12.1 levels at the start of the monitoring process. It serves as a starting point to assess the impact in capacity resulting from the implementation of multisectoral, One Health best principles and practices to address zoonotic diseases. SPAR indicator levels are reported annually by IHR States Parties to the IHR secretariat in WHO. The assessed level of the SPAR indicator C12.1 at the start of the monitoring process will be the baseline. For coherent and consistent historical data collected, it is recommended to use the SPAR 2021 version. This may require retrospective data collection to determine the baseline status. For example, if the level of the SPAR indicator was 2 (out of the 1 to 5 scale) during a specified year (e.g. Baseline Year), the baseline level is 2.

Target	The target value for this impact indicator should be based on the anticipated long-term effects of One Health collaborative efforts on the country's capacity. It should reflect a direct change in SPAR indicator levels, quantifying the expected impact that countries are striving to achieve. It is important to consider that measuring the impact attributable to the One Health implementation may require several years. Therefore, a future period of three to five years, after the monitoring process has already begun, is a suitable timeframe to assess the expected impact. By setting a target value in this manner, countries can work towards achieving meaningful and sustainable capacity improvement in zoonotic disease prevention and control, which is a crucial aspect of public health and One Health initiatives. For example, the target is to achieve a direct change of +3 of SPAR indicator level by year 5 (e.g. to progress from baseline level 2 to target level 5). Target Calculation: target indicator level at year 5 (5) - baseline indicator level at baseline year (2) = +3 This indicates an expected increase of 3 in SPAR indicator levels over a period of five years, starting from the baseline year. The target provides insight into the anticipated progress on capacity improvement as a long-term effect of the One Health efforts in place. Including a comparison period of a minimum of three years after the implementation or monitoring process begins is crucial to assess long-term impact.
Reporting frequency	Every 3–5 years (through annual mandatory reporting).
Unit of measure	SPAR indicator level, direct change in level.
Means of verification	SPAR report.
Limitations/consideration	This impact indicator requires careful interpretation. The SPAR is a self-assessment tool using qualitative measurement of indicators based on the IHR (2005), so an increase in levels may have an interpretation variation. Thus, this indicator does not quantify the effective management of zoonotic diseases using the multisectoral, One Health Approach. As such, further consideration should be given to: Parties involved in the development of the SPAR reports - How well data source and means of verification are available to assess/report for SPAR in a country How well capacities have been consistently implemented in real-time during zoonotic disease events and emergencies for a period of time Other factors or scenarios that may affect the SPAR indicator levels during a period of time (e.g. political, environment, and etc.) Capacity 12 of the SPAR addresses specifically zoonotic diseases. However, other capacities (e.g., C4, C5, C6, C11) can be considered to measure the impact of addressing public health threats in general, not only zoonotic diseases.

Annex E. **Indicator matrix**

N	Name	Organization	Sector	Title	M&E role (e.g. indicators data reporting/collection/analysis, within the sector/ across sectors)
1					
2					
3					

Number	Library code if applicable	Country code	Country indicator description	Unit of measure	Baseline	Baseline timeframe	Target	Target timeframe	Reporting frequency	Means of verification	Data collection method	Data Reporting Responsibility (person/group/ organization)	Data analysis responsibility (person/ group/ organization)	Other comments
Example														
1	O4	RCM1	Number of coordinated activities conducted for risk communication	Coordinated activities	1	January-December 2025	5	January-December 2025	Annual	Activities/ meeting reports	Collect relevant documents that verify that activities were completed.	(Name), community liaison (community name); (Name), communication officer, ministry of health (Name), communication officer, ministry of agriculture; (Name), communication officer, ministry of environment	(Name), M&E officer	
1														
2														
3														
4														
5														
6														
7														

Annex F. **M&E OT workshop report template**

1. M&E OT meetings/workshop administrative overview

- Include the date, time, place, agencies and list of participants attending.

2. M&E OT meetings/workshop summary (executive summary)

- Summarize the objective(s), approach and overall outcome of the M&E OT meeting/workshop.

3. Summary of information gathering (refer to the "Information gathering" tab of the M&E OT workbook)

- Indicate the objectives for coordinated M&E activities in the country (if applicable).
- List stakeholders involved or to be included in coordinated M&E activities, and who to report to.
- Summarize the existing M&E processes (informal and formal), along with their supporting documentation (frameworks, plans) and resources (e.g. data collection tool, terms of reference, indicator reference sheets, data flow chart, protocol, etc.).
- List existing zoonotic diseases and other One Health-related frameworks, strategies and plans that have M&E components and/or those that need to incorporate M&E components.

4. The country objectives and approach for using the M&E OT (refer to "Country objectives and approach" tab of the M&E OT workbook)

- List M&E gaps or needs that M&E OT will be supporting.
- List zoonotic diseases and other One Health-related plans or frameworks intended for the use of the M&E OT.
- Indicate the country objectives and approach for using the M&E OT.

5. Summary of M&E OT framework customization, and country indicators

- Brief description of the customization process.

- List the technical areas selected and include the customized M&E OT framework (refer to "Technical Areas" and "Impact" tabs of the M&E OT workbook).
- List the country indicators developed accordingly.

6. The Indicator matrix

- Include the developed Indicator matrix (refer to the "Indicator matrix" tab of the M&E OT workbook).
- Provide brief comments on a summary plan of the country indicators (e.g. country context, timeframe, baseline, target, methods) and roles and responsibilities assigned for data collection and analysis.

7. The Data Collection Tool

- Include the Data Collection Tool with country indicator forms developed.
- Provide brief comments on data collection forms.

8. The implementation roadmap

- Include developed roadmap (refer to the "Implementation roadmap" tab of the M&E OT workbook).
- Provide brief comments on the action's implementation timeline.

9. Any other issues for the record

- For example, significant sources of conflict or lack of agreement among partners.

Annex G. **M&E plan template**

1. Introduction

- Provide background information about the programme and related M&E.

1.1 Purpose of this plan

- Describe what is the purpose of the M&E plan, the individuals or groups who prepared it, its intended audience and the rationale behind its creation.

1.2 Program summary

- Offer essential information about the programme for which this M&E plan is designed.

1.3 Logical framework

- Describe the framework for M&E that provides the programme's impact, outcome, outputs and activities.
- Include in the appendices a summary M&E framework table (Appendix I) and an activity monitoring matrix (Appendix II).

2. Monitoring & evaluation plan

- Describe the indicators, processes and tools that will be used to monitor activities and results, referencing M&E documentation (e.g. indicator reference sheets, Indicator matrix, etc.) as needed.
- Add or refer in the appendices or attachments the Indicator matrix (Appendix III), indicator tracking (Appendix IV), indicator reference sheets, and the Data Collection Tool/other key tools.
- Describe how you plan to periodically assess and review the outcome and impact results of the programme (e.g. how often, and how this periodic review will be used for decision-making)
- Describe any activities that will be used to help evaluate outcome or impact level indicators (e.g. surveys, key informant interviews, focus groups, randomized control trials or experimental studies).

2.1 Data flow

- Insert a flowchart and accompanying description illustrating the data flow from the point of collection to the management team, and subsequently to other stakeholders.

2.2 Data management

- Describe how the collected data will be stored and managed.

3. M&E responsibilities

- Describe the responsibilities on M&E tasks, for instance, who is:
  - Responsible (R): Person or group responsible for implementing the work to complete the task or create the deliverable.
  - Accountable (A): a person who delegates and reviews the work involved in a programme. They ensure the responsible person or team knows the expectations of the programme and completes work on time.

- Consulted (C): person or group of people responsible for providing input and feedback on the work being done in a program. They may be individuals who are not working on a given task but those work will be affected by the outcome.
- Informed (I): person or group of people who must be informed of the progress of a programme. They are not the decision-makers and are not to be consulted with the details of the process, but tasks and deliverables could affect their work.

- An example of the M&E responsibilities table is provided below. List the names of all those responsible, consulted, accountable and informed in the table:

M&E tasks	Responsibilities			
	M&E focal point	M&E officer	Team leader	Manager
	Names:	Names:	Names:	Names:
Develop and maintain M&E plan	C	R	A	I
Review indicator reference sheets	C	R	A	I
Review M&E recommendations	I	C	R	A
Collect indicators data	R	A	C	I
...	...	...	...	...

4. Resources

- Indicate the budget and other resources that will be required for implementing this M&E plan.

5. Appendices

- Add or refer to any necessary appendices or attachments, such as tables, tools, forms, and materials that will be used for M&E.

Appendix I: Summary M&E framework

(Section 1.3 Logical framework)

Results level	Indicators					
	Code	Description, unit of measure	Baseline	Target	Means of verification	Reporting frequency
Impact: [describe]						
Outcome 1: [describe]						
Output 1.1: [describe]						
Output 1.2: [describe]						
Outcome 2: [describe]						
Output 2.1: [describe]						

Appendix II: Activity monitoring matrix

(Section 1.3 Logical Framework)

Activity number and description	Current implementation status	Timeframe for implementation	Implementing person/group	Documents required for activity to be completed	Cost calculation	Cost (for each year of implementation)	Funding source
	[Not started, in progress, completed]	[Quarter, date, year]	[Who is responsible for implementing the activity]	[Means of verification]	[Per activity]	[Per activity/ year]	

Appendix III: Indicator matrix
(Section 2. Monitoring and evaluation plan)

Number	Indicator code	Indicator description	Unit of measure	Baseline	Baseline timeframe	Target	Target timeframe	Reporting frequency	Means of verification	Data collection method	Data reporting responsibility

Appendix IV: Indicator tracking table

[refer to the Data Collection Tool, "Indicator tracking table"]

(Section 2. Monitoring and evaluation plan)

RESULTS AND INDICATOR DESCRIPTION			YEAR 1 (XXXX)							YEAR 2 (XXXX)							CUMULATIVE		
			Q1-2		Q3-4					Q1-2		Q3-4					[Programme total]		
Results	Indicator	Baseline	Target	Actual	Target	Actual	Annual target	Annual actual	Percent complete	Target	Actual	Target	Actual	Annual target	Annual actual	Percent complete	Target	Actual	Percent complete
Example																			
Output 1.4: The multisectoral coordinated administrative and technical activities are implemented, monitored, and reviewed	MCM2. Number of coordinated activities organized/ conducted by One Health Platform	0	2	1	3	4	5	5	100 percent (5/5)	1	2	2	1	3	3	100 percent (3/3)	8	8	100 percent (8/8)

Glossary

All terms and definitions below are used in the context of the TZG and M&E OT only and may be used differently elsewhere, including in other publications of the FAO, WHO, and/or WOAH. Countries may choose to use their own terminology in the implementation of the M&E OT.

Academia/academic institutions: Institutions of higher education. May refer to publicly funded, privately funded, and jointly funded institutions, and may refer to those functioning under and accountable to governmental ministries of education or labour, and those that are not.

Action plan: See plan.

Address: Here, to take policy and technical measures to prevent, detect, and respond to, as well as to prepare for and assess zoonotic diseases.

Animal: Domestic animals (both pets and livestock) and wildlife, including paradomestic or urban-dwelling non-domestic animals (e.g. rats, pigeons).

Assessment: Refers to the wide variety of methods or tools used to evaluate, measure, and document the results for different purposes, including identification of gaps and their further improvement. For example, economic assessments, intra and after-action reviews, and simulation exercises.

Authorized: Sufficiently supported by national policies, legislation, laws, regulations, or other government instruments.

Capacity: Refers to the combination of skills, knowledge, resources, and abilities that individuals, organizations, or communities possess, allowing them to effectively implement actions, solve problems, and achieve their objectives.

Collaboration: Individuals or institutions working together to produce or achieve something.

Competency: The ability of a person to integrate knowledge, skills, and attitudes in their performance of tasks in a given context. Competencies are durable, trainable and, through the expression of behaviours, measurable.

Competent: Able to integrate knowledge, skills, and attitudes in their performance of tasks in a given context. In the case of an authority, agency, or organization, it can also mean to be legally entitled to do a specific activity.

Communities: The target audience, which means the group of people who are at risk or who have a direct influence on risk mitigation due to their practices or behaviour.

Community engagement: This means that affected communities are consulted about and included in the response to risk reduction efforts for a zoonotic disease by taking into account local social, and cultural norms and beliefs, as well as political, economic and other realities in the communication.

Context: The entire scope of the circumstances, setting, or environment in which an event is taking place, or a situation exists, and in terms of which the event or situation can be fully understood and assessed.

Coordinated activities: Activities to address a health threat at the human-animal-environment interface based on collaboration, communication, and coordination across all relevant sectors and disciplines, with the ultimate goal of achieving optimal health outcomes for both people and animals while safeguarding the environment.

Coordinated operational documents: A standardized operational description of activities to be undertaken and/or used as a reference across all relevant sectors to address zoonotic diseases. These documents provide specific step-by-step operational guidelines and instructions. Examples: Standard Operational Procedures (SOPs), manuals, and protocols.

Coordinated surveillance and information sharing system: The platform or system that allows for the collection, aggregation, and analysis of surveillance elements across multiple sectors collaborating at the human-animal-environment interface, to enable them to effectively work together toward their aligned objectives and goals.

Coordination: The organization of the different parts of an activity to enable them to work together effectively.

Cultural norms and beliefs: The behaviour patterns that are typical of specific groups, often passed down from generation to generation by observational learning within the community.

Decision tool/process: A decision tool is a tool or process which can be used to determine the consequence (e.g. high, low, negligible) and the need for a response to a zoonotic disease event, based on available information from investigations, risk assessments, surveillance data, etc. Where necessary, it helps determine the scale and nature (sector-specific or multisectoral, One Health) of a required response. It may take a variety of forms including a decision tree, algorithm, or scored checklist. Further, the tool should be endorsed by all relevant sectors before an emergency occurs.

Demonstrated evidence: Includes information on how effective coordinated zoonotic disease management was enabled through the achievement of multisectoral One Health outcomes (e.g. workforce development, joint management, operational infrastructure and MCM coordination). Assessments, internal reviews, reports, peer reviews, research, case studies and significant stories of change can demonstrate the effective One Health approach applied in practice.

Discipline: A branch of knowledge (e.g. economics, virology, epidemiology, law, clinical medicine, vector biology).

Distributed leadership: A leadership approach where decision-making authority and responsibilities are shared among multiple individuals rather than concentrated in a single leader or hierarchy.

Ecosystem: A dynamic complex of plant, animal, and microorganism communities and their non-living environment, interacting as a functional unit in a particular physical environment. Ecosystems may be small and simple, like an isolated pond, or large and complex, like a specific tropical rainforest or a coral reef in tropical seas.

Effective coordinated planning and preparedness: A comprehensive and well-coordinated approach aimed at ensuring the country is ready to manage and respond effectively to zoonotic disease events or emergencies. Effective refers to the degree to which something successfully achieves its intended goals or produces the desired results.

Element: A component or part of something. Here, it refers to components of activities that may be done in any order.

Emergency: A substantial zoonotic disease event that interacts with existing conditions of exposure, vulnerability, and capacity and may disrupt the function of a community or society at any scale and may overwhelm the national capacity to respond to the

needs of the affected population, and lead to human, animal, material, economic, and/or environmental losses and impacts.

Emergency preparedness: The knowledge, capacities, and organizational systems developed by governments, response and recovery organizations, communities, and individuals to effectively anticipate, respond to, and recover from the impacts of likely, imminent, emerging, or current emergencies, including zoonotic disease emergencies.

Emerging zoonotic disease: Zoonotic disease due to known pathogens that have not yet occurred in a specific geographic area, in a specific species, or that are increasing in prevalence (here, different from new pathogens, see definition below).

Endemic zoonotic disease: Zoonotic disease that exists continually or continuously in a geographic area, so that cases of disease could be expected.

Environment: The natural world or physical surroundings in general, either as a whole or within a particular geographical area.

Equitable: Fair and impartial, but not implying equality. Here, often refers to the distribution of resources.

Event: An occurrence of a zoonotic disease, including an outbreak, epidemic, or pandemic in people or animals. May or may not refer to a single or small number of clinical case(s) or detected zoonotic disease infection(s), depending on the hazard and the circumstances.

Framework: A basic structure or idea underlying a system, concept, or document, or a specific set of rules, ideas, or beliefs used to approach a problem or decision.

Functions: Sector-specific and multisectoral responsibilities required to ensure effective zoonotic disease management.

Governance: The set of structures, policies, processes, and/or decisions that support the management of a system or group.

Governance processes: Refers to any set of written or documented structures, policies, or guidelines that define the roles and management of a multisectoral One Health coordinating structure. Examples of formal governance processes include memoranda of understanding (MoUs), agreements, and governance manuals.

Hazard: Anything with the potential to cause adverse health effects (e.g. viruses, bacteria, chemicals, floods, earthquakes); may be referred to as a threat.

Human-animal-environment interface: A continuum of contacts and interactions among people, animals, their products, and their environment(s); in some cases, facilitating transmission of zoonotic pathogens or shared health threats.

Indicator: Something that can be measured; here, refers to a variable directly or indirectly measured repeatedly over time to reveal change in a system.

Indicator matrix: A structured planning resource used in M&E processes. It offers a comprehensive overview of specific indicators developed for planning and streamlining data tracking and progress measurement.

In-service: Training carried out during professional services or work; here refers to training.

Integrated: The state of two or more things being combined into one.

Iterative: Something that is conducted/repeated periodically over time, generally to achieve more accurate results.

Joint: The state of being or doing something together.

Joint management: Refers to the joint coordination and management of resources and responsibilities pertaining to the mitigation of, preparedness for, response to, and recovery from a zoonotic disease event.

Joint rapid response team roster: Document or platform with relevant variables (e.g. roles and responsibilities, years of experience, etc.) that identifies trained staff from all sectors who will be called on to implement the response together and are trained together through programs developed and implemented using a multisectoral, One Health approach. They are a multisectoral team prepared to be mobilized during an emergency response.

Legal instruments: Written legal documents that record the formal execution of legally enforceable acts or agreements. This can include any regulatory instrument setting up a coordination mechanism across ministries and other entities for zoonotic disease governance.

Level (administrative): Refers to the levels within the country, e.g. central/national/federal, subnational (district, governorate, state), local/community.

Level (governmental): Refers to the functional level within the administrative level, e.g. prime ministerial, ministerial, technical.

Mapping: Comprehensively collecting and reviewing information on what infrastructure, activities, resources, etc., already exist in the country for addressing zoonotic diseases.

Mechanism: A standing system, part of an infrastructure, or an organized group or network designed to accomplish a specific task; here, in the context of a Multisectoral Coordination Mechanism, refers to a standing, organized group working under a set of documented procedures. May be named as a platform, committee, task force, working group, etc.

Ministry: Refers to the national governmental entity responsible for a given topic or sector, normally the competent authority. May be referred to differently by different countries (e.g. agency, department, directorate).

Mitigation: See risk reduction.

Monitoring and evaluation: A process that helps measure, track, improve performance, and assess the results of an ongoing or completed activity, program, or policy by providing indications of the extent of progress and achievement of objectives, and progress in the use of allocated funds, to improve performance, ensure accountability, or demonstrating value. Includes Monitoring: the continuing and systematic collection of information on specified indicators related to the project or process and Evaluation: the systematic and objective assessment of the relevance, efficiency, effectiveness or impact of a project or process based on the set of information collected on the indicators during monitoring.

Multisectoral: Involving participation of more than one sector working together across a joint program or response to an event. Saying multisectoral does not always mean that the human, animal, and environmental health sectors are engaged as is the case when saying a One Health approach (see definition).

Multisectoral Coordination Mechanism: A multisectoral, One Health coordination mechanism (MCM) for zoonotic diseases refers to any formalized, standing group that acts to strengthen or develop collaboration, communication, and coordination across the sectors responsible for addressing zoonotic diseases and other health concerns at the human-animal-environment interface.

Multisectoral, One Health approach: The approach mobilizes multiple sectors, disciplines, and communities at varying levels of society to work together to foster well-being and tackle threats to health and ecosystems, while addressing the collective need for clean water, energy and air, safe and nutritious food, taking action on climate change, and contributing to sustainable development.

Occupations: These are identified and aligned with the International Standard Classification of Occupations of the International Labour Organization to the extent possible. Identified occupations include those traditionally involved in zoonotic disease management (i.e., human health, animal health, environment, and wildlife) and those outside the traditional sectors and disciplines.

One Health: An integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals, and ecosystems. It recognizes the health of humans, domestic and wild animals, plants, and the wider environment (including ecosystems) are closely linked and interdependent.

One health coordination structure (formal and informal): Formal refers to any standing, organized group that is formally established by government, ministries, institutions, or organizations with a clearly defined mandate and authority. It includes key representatives of relevant sectors to address zoonotic diseases. Informal operates at a technical level without formal establishment and a clearly defined structure. They operate without formal and written rules or procedures. Informal coordination structures might emerge unplanned with ad-hoc communication channels. It includes key representatives of relevant sectors to address zoonotic diseases.

Operational infrastructure: Refers to physical and organizational structure and facilities, incorporating all relevant sectors to be activated in case of a zoonotic disease emergency or event. Examples include a coordinated clear chain of command with designated roles and responsibilities, communication processes in place in case of emergency, mechanisms for collaboration, personal networks and information sharing protocols developed during the preparedness phase, emergency operations centre or response committees, incident management system (or incident command system) or equivalent structure, etc.

Outcome: A result or effect of an activity.

Output: The documentation or other physical or measurable evidence of an outcome.

Performance improvement process: An approach using metrics to evaluate timeliness and quality of activities throughout the investigation and response that result in improvements to workflows and actions. When repeated consistently, it establishes the habit of ensuring there is continual learning and improvement from every event.

Plan: An operational or action-oriented description of activities to be undertaken, often based on an overarching strategy.

Policies: "Policy" is a law, regulation, procedure, administrative action, incentive, or voluntary practice of governments and other institutions. It includes legal and regulatory frameworks, national and subnational policies, and operational policies (rules, regulations, codes, etc.) that support multisectoral, One Health activities for zoonotic diseases prevention, control, and response in case of emergency across all relevant sectors.

Preparedness: A process used in advance of a potential zoonotic disease event to ensure that capacity and resources will be available to respond.

Pre-service: Training carried out before professional services or work (e.g. college, university, apprenticeship), here refers to training.

Priority zoonotic diseases: Zoonotic diseases of greatest concern that should be jointly addressed by human, animal, and environmental health sectors in a country or region. The process used in prioritizing such diseases should follow a multisectoral, One Health approach.

Real-time performance improvement: An approach used to evaluate early detection activities and responses to outbreaks, that can result in improvements to workflows and actions. When repeated consistently, it establishes the habit of ensuring there is continual learning and improvement from every event.

Recovery: Action that takes place immediately after a response to a zoonotic disease event, when immediate animal health, public health, and environmental concerns have been addressed and concerns for lives and livelihoods have been mitigated. Recovery refers to the restoration of damaged infrastructure and resources, and all other actions taken to ensure a return to normalcy.

Region: A group of countries that have some similarities, normally geographically linked.

Relevant sectors/disciplines/stakeholders/ministries: At a minimum, those sectors, disciplines, stakeholders, or ministries that are key to the specific health threat to be addressed using a multisectoral, One Health approach. Other sectors and agencies that are stakeholders in the health threat (e.g. private stakeholders, academia), may be included as needed.

Resources: Materials, staff, time, or money required to conduct activities.

Response: Those activities are undertaken to react to a zoonotic disease event anywhere on the spectrum from increased monitoring to full emergency response.

Risk: A function of the likelihood that a zoonotic disease event may occur and the magnitude of the impact if it were to occur.

Risk Assessment: In this context, risk assessment is defined as the systematic process of gathering, assessing, and documenting information to estimate the level of risk and associated uncertainty related to a zoonotic disease event, during a specified period and in a specified location.

Risk communication: The real-time exchange of information, advice, and opinions among experts, community leaders or officials, and the people who are at risk or who have a direct influence on risk mitigation due to their practices or behaviour. Risk communication ensures that people and communities are aware of current threats and can be used to promote behaviours to reduce ongoing risks.

Risk factor: Any physical or contextual variable that contributes to the likelihood or impact of either a priority zoonotic disease, zoonotic disease event, or emergency at the individual or population level.

Risk management: The identification and implementation of policies and activities to avoid or minimize the likelihood and/or impact of ongoing or potential zoonotic disease events. In practice, risk management typically refers to responding to current disease events (e.g. quarantine, culling, movement control).

Risk reduction/risk mitigation: The identification and implementation of policies and activities designed either to prevent zoonotic disease agents from creating health risks

or to lessen their frequency, distribution, intensity, or severity. In practice, typically refers to avoidance or decreasing current ongoing or future risk and/or impact.

Sector: A distinct part or branch of a nation's sociological, economic, or political society or a sphere of activity such as human health, animal health, or environment.

Stakeholder: Any individual or group that is or should be involved as a partner in preventing or managing zoonotic diseases. Stakeholders include those who impact, are impacted by, or perceive themselves to be affected by zoonotic disease threats, including those who may be affected by measures to address zoonotic diseases.

Stakeholder analysis: A consultative process whereby all relevant stakeholders to the health threat at the human-animal-environment interface are identified and the relationships and networks among them are mapped.

Strategy: A high-level, overarching or conceptual plan or set of policies designed to achieve a specific outcome, often operationalized through a specific action plan or operational plan.

Subnational: Those administrative levels below the central or national level.

Sufficiently resourced: The financial, labour, intellectual, skill, and infrastructure requirements of the coordinated activity/strategy/plan are met so that it can achieve its objectives successfully. This requires establishing three things: 1) resource requirements; 2) resources available; and 3) comparison thereof.

Surveillance: The continuous, systematic collection, analysis, and interpretation of data needed for planning, implementation, and evaluation related to zoonotic diseases.

Threat: A zoonotic disease hazard, agent, event, concern, or issue that poses risks to human or animal health.

Timeliness metrics: Time interval between outbreak milestones.

Training: Includes education and training programs which give individuals the knowledge, skills, and abilities they need to meet national and international workforce demands. It includes pre-service (before a person begins professional services or work) and in-service (during professional services or work) programs.

Trigger: Something that initiates a process or action.

Tripartite: Term used to describe the three agencies responsible for human and animal health internationally, the FAO, WHO, and WOAH in their work together.

Vulnerability/vulnerable: The degree to which a population, individual, or organization is unable to anticipate, cope with, resist, and recover from the negative impacts of events such as a zoonotic disease event.

Wildlife: Animals considered to be wild or feral or otherwise not adapted to domestic situations; may be mammals, birds, fishes, reptiles, amphibians, etc.

Workforce: Relevant functions and occupations across multiple disciplines and sectors at the human-animal-environment interface to jointly address zoonotic diseases. Includes but is not limited to students and staff of schools and universities, technical professionals, policymakers, community leaders or workers – both paid and unpaid – in the government, non-governmental, academic, and private sectors.

Workforce development: The continual process of developing education and training programs to enable individuals to acquire knowledge, skills, and abilities that provide individuals with the capacity to meet national and international workforce needs.

Zoonotic disease agent/pathogen: A hazard causing a zoonotic disease.

Zoonotic Disease Event: An occurrence of a zoonotic disease, including an outbreak, epidemic, or pandemic in people or animals. May or may not refer to a single or small number of clinical case(s) or detected zoonotic disease infection(s), depending on the hazard and the circumstances.

Zoonotic disease management: Activities concerning all five stages of the disease management cycle: prepare, prevent, detect, respond, and recover.

Zoonotic disease prevention and control: Any intervention carried out since the One Health strategy and targeted at a specific zoonotic disease or group of zoonoses. It can be carried out in all sectors and geographical areas or sector or geographical area but must be a consequence of the One Health strategy.

Zoonotic diseases (zoonoses): Infectious diseases that can be spread between animals and humans; can be spread by food, water, fomites, or vectors.

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References

References

Bochner, A. F., Makumbi, I., Aderinola, O., Abayneh, A., Jetoh, R., Yemanaberhan, R. L., *et al.* 2023. Implementation of the 7-1-7 target for detection, notification, and response to public health threats in five countries: a retrospective, observational study. *The Lancet Global Health*. Published April 12, 2023. doi: 10.1016/S2214-109X(23)00133-X

Centers for Disease Control and Prevention. (n.d.). *Policy process*. Retrieved from https://www.cdc.gov/policy/opaph/process/docs/policyDefinition.pdf

FAO, UNEP, WHO and WOAH. 2023. *A guide to implementing the One Health Joint Plan of Action at national level*. Geneva. https://openknowledge.fao.org/handle/20.500.14283/cc7916en

FAO, UNEP, WHO and WOAH. 2022. *One Health Joint Plan of Action (2022–2026). Working together for the health of humans, animals, plants and the environment*. Rome. https://doi.org/10.4060/cc2289en

FAO, WHO and WOAH. 2019. *Taking a Multisectoral, One Health Approach: A Tripartite Guide to Addressing Zoonotic Diseases in Countries*. Available at: https://openknowledge.fao.org/handle/20.500.14283/ca2942en

Impouma, B., Roelens, M., Williams, G. S., *et al.* 2020. Measuring timeliness of outbreak response in the World Health Organization African Region, 2017-2019. *Emerging Infectious Diseases, 26*(11), 2555–2564. doi: 10.3201/eid2611.191766

WHO, FAO and WOAH. 2022. *Multisectoral Coordination Mechanisms Operational Tool - An operational tool of the Tripartite Zoonoses Guide*. Geneva. https://openknowledge.fao.org/handle/20.500.14283/cc0483en

WHO, FAO, WOAH. 2022. *Surveillance and Information Sharing Operational Tool - An operational tool of the Tripartite Zoonoses Guide*. Geneva, Rome and Paris https://openknowledge.fao.org/handle/20.500.14283/cc0716en

WHO, OIE and FAO. 2020. *Joint Risk Assessment Operational Tool (JRA OT): An Operational Tool of the Tripartite Zoonoses Guide – Taking a Multisectoral, One Health Approach: A Tripartite Guide to Addressing Zoonotic Diseases in Countries*. Geneva. https://openknowledge.fao.org/handle/20.500.14283/cb1520en

WHO. 2023. *Guidance for conducting a country early action review (EAR): rapid performance improvement for outbreak detection and response, 31 August 2023*. Geneva: World Health Organization. (WHO/WPE/HSP/CER/2023.1). Licence: CC BY-NC-SA 3.0 IGO. https://www.who.int/publications/i/item/WHO-WPE-HSP-CER-2023.1

ISBN 978-92-5-139442-7
9 789251 394427
CD3642EN/1/12.24