Workforce development for effective management of zoonotic diseases

Operational tool of the Tripartite Zoonoses Guide

Food and Agriculture Organization of the United Nations

World Health Organization

World Organisation for Animal Health
Founded as OIE

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Contents

Acknowledgements

Acronyms

COVID-19	Coronavirus Disease 2019
FAO	Food and Agriculture Organization of the United Nations
ILO	International Labour Organization
M&E	Monitoring and Evaluation
M&E OT	Monitoring and evaluation for effective management of zoonotic diseases: Operational Tool of the Tripartite Zoonoses Guide
UNEP	United Nations Environment Programme
OIE	Office International des Epizooties
WFD OT	Workforce Development Operational Tool
WHO	World Health Organization
WOAH	World Organisation for Animal Health

Context

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) launched the Tripartite Zoonoses Guide (1), a summary of the work of more than 100 experts worldwide on best practices in managing zoonotic diseases. The guide includes operational tools to facilitate understanding by government authorities of national and subnational contexts and for developing capacity in strategic technical areas. The operational tools for each technical area covered in the Guide are shown in Fig. 1: the (1) Multisectoral Coordination Mechanism Operational Tool, (2) the Joint Risk Assessment Operational Tool, the (3) Coordinated Investigation and Response Operational Tool, (4) the Surveillance and Information Sharing Operational Tool, (5) the Workforce Development for Effective Zoonotic Diseases: Operational Tool of the Tripartite Zoonoses Guide (WFD OT) and (6) the Monitoring and evaluation for effective management of zoonotic diseases: Operational Tool of the Tripartite Zoonoses Guide (M&E OT). The WFD OT is one of several operational tools that supplement the Tripartite Zoonoses Guide to strengthen official capacities for zoonotic disease management. The tools are complementary and can be used independently or together to strengthen national and subnational capacity for management of zoonotic diseases. Specifically, the WFD OT supports countries to plan for and prepare their respective workforces to perform coordinated functions that are critical for effective zoonotic disease management as described in section 5.6 of the Guide.

The development of the WFD OT was informed and advised by the Technical Advisory Group (TAG) consisting WHO technical staff at the Headquarters and regional offices, representatives from FAO and WOAH, and a workforce development expert. The expert who joined the TAG in individual capacity had no conflict of interest and once provided a consulting service commissioned by WHO to conduct landscape review associated with the development of the WFD OT.

The process of tool development was led by WHO with monthly consultation with the TAG. The TAG contributed to scope setting, conceptual approach and exercise developments, and overall technical contents. The United Nations Environment Programme (UNEP) and the International Labour Organization (ILO) specifically contributed to the database of trainings and resources as part of the tool.

Figure 1. WFD OT in the context of the Tripartite Zoonoses Guide

SPECIFIC TECHNICAL ACTIVITIES

Multisectoral, One Health Coordination

Joint Risk Assessment

Coordinated Investigation and Response

Surveillance and Information Sharing

Workforce Development

Risk Communication and Community Engagement

Planning and Preparedness

Monitoring and Evaluation
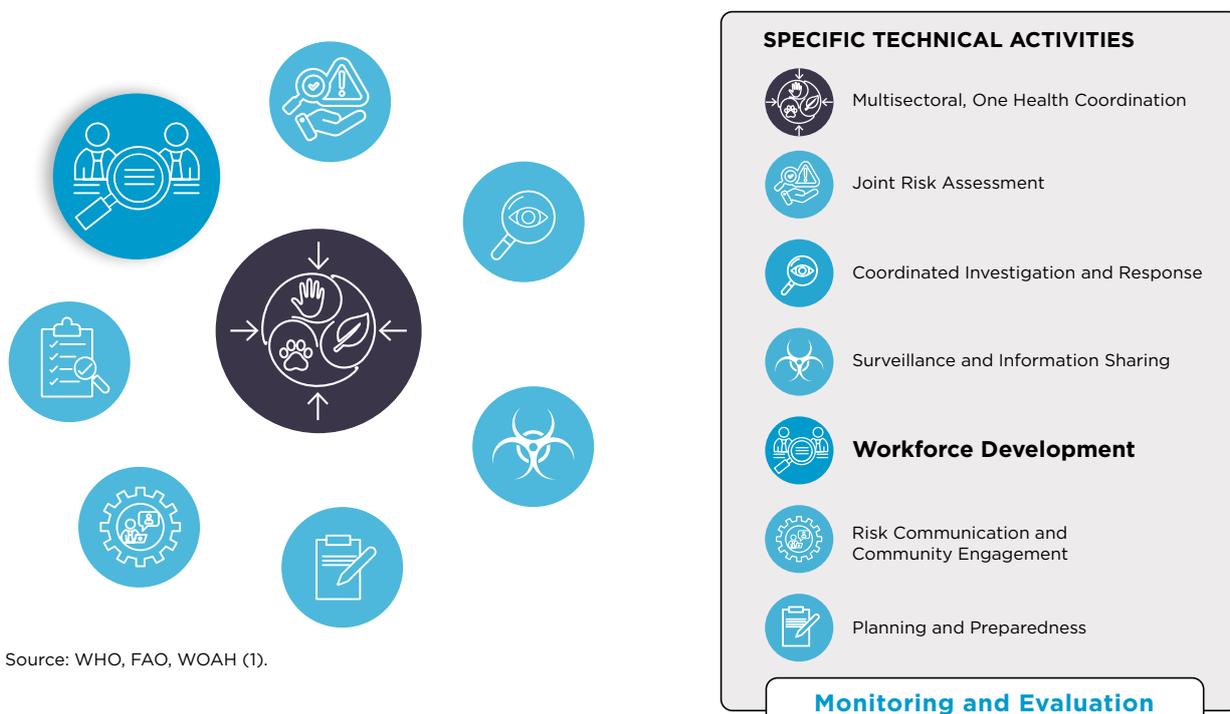
Source: WHO, FAO, WOAH (1).

Introduction to the WFD OT

Introduction

Most countries recognize the benefits of a multisectoral, One Health approach to managing priorities at the human–animal–environment interface. Despite enthusiasm for the One Health approach, many countries still face difficulties in operationalizing multisectoral coordination, communication and collaboration to ensure that the workforce can fulfil its functions.

The objective of the WFD OT is to support countries in planning and strengthening a multisectoral workforce for effective zoonotic disease management. The target users of the tool are government authorities at all administrative levels, from national to local, in all sectors relevant to zoonotic disease management, including human resource personnel, trainers and educators. They include not only personnel in disciplines traditionally associated with One Health, such as human health, animal health and the environment, but also in others relevant to One Health, such as communications, education, policy and social sciences. It is recommended that the scope of the WFD OT be defined for the national workforce, with optional inclusion of workforces at subnational levels.

Box 1 provides a hypothetical challenge at the human–animal–environment interface for which the official workforce could be strengthened through use of the WFD OT.

Box 1. Use of the WFD OT to address a hypothetical challenge at the human–animal–environment interface

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Both the public health and the animal health sectors in a country have been testing wastewater for surveillance of pathogens. Polio is a common disease for which wastewater surveillance is used to measure disease status, and the animal health authority occasionally tests wastewater to determine the presence of avian influenza virus. During the coronavirus disease 2019 (COVID-19) pandemic, capacity to identify SARS-CoV-2 in wastewater was required, and public health authorities, animal health authorities and academic institutions combined resources for early detection of the virus in wastewater. The environment sector was also involved. It was therefore necessary to develop capacity in relevant sectors at both national and subnational levels. The experience showed that management of a disease of unknown etiology requires expertise in several sectors and disciplines and integration of knowledge. The functions and competencies required, such as for sample collection, laboratory detection and interpretation of epidemiological data, should continue to be strengthened and maintained across sectors for management of other zoonotic diseases.

The pathway for use of the WFD OT is shown in Fig. 2. It has three modules: In module 1, a mechanism to oversee use of the tool and completion of a situation analysis is established. In module 2, users identify existing and expected functions, the associated competencies and the occupations in institutions. In module 3, users identify relevant trainings, tools and resources for addressing challenges in the official workforce with respect to their functions, occupations, competencies and the enabling environment. Recommendations, monitoring and evaluation can be integrated into national workforce plans. This pathway was adapted from the guidance provided in the _National workforce capacity to implement the essential public health functions including a focus on emergency preparedness and response (2)._

Figure 2. Flow chart of the WFD OT approach for identifying and addressing gaps in the workforce for effective management of zoonotic diseases at the human–animal–environment interface. *Source: adapted from WHO (2).*
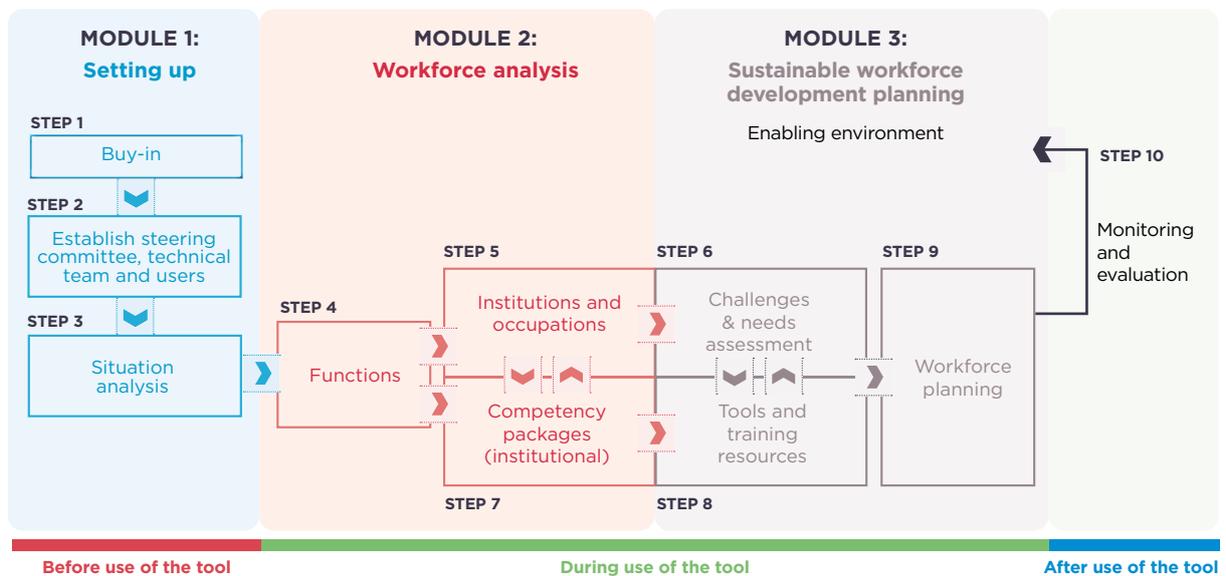
The WFD OT incorporates principles and best practices outlined in Chapter 5.6. Workforce development of the *Tripartite Zoonoses Guide (1)*. In a series of modules and exercises, the WFD OT enables government authorities to identify the existing and needed functions, occupations and competencies in the official workforce and its enabling environment at institutional level. The steps include a situation analysis and identification of the priority workforce functions, occupations and competencies required for effective zoonotic disease management. Any challenges and needs in these areas and in the enabling environment are identified.

Options are proposed to address the challenges and to meet the needs during workforce planning, including competency-based trainings, tools and resources. The resulting report can be used in the sectors that contribute to a One Health approach to coordinate planning and strengthen the workforce. The report and outputs can be included in workforce strategies and in plans for prioritization, financing, coordination and implementation.

The WFD OT can be used in various ways. Countries can use it entirely online (with some virtual meetings with the technical team), in an in-person workshop or by combining online and in-person components. While support is offered by FAO, WHO and WOAH, countries can also use the tool independently.

Background

ILO urges collaboration among all sectors and disciplines to address multifaceted challenges such as zoonotic disease events (3). Most national workforce strategies, however, are designed around individual disciplines and sectors (see Box 2). Moreover, approaches for ensuring adequate human resources are often based on assumptions about the occupations involved, their functions and the associated occupational standards. Their functions are rarely considered beyond sector-specific requirements and mandates. A multisectoral, One Health approach for workforce development (see Box 2) is necessary to fully understand existing and needed functions, occupations and competencies in a country and to ensure that personnel are adequately trained to perform sector-specific and multisectoral functions for effective management of zoonotic diseases.

Box 2. Definitions

For the purposes of the WFD OT, a "sector" is a distinct part or branch of a country's sociological, economic or political establishment or a sphere of activity, such as human health, animal health or the environment. Examples of stakeholders who represent these sectors in both public and private spheres are described in *guidance for user representation (M10)* available in the materials.

For the purposes of the WFD OT, a One Health approach to workforce development is the continual process of managing and developing a workforce according to the sector-specific and multisectoral functions required to manage zoonotic diseases. Sector-specific functions are usually technical, while multisectoral functions are non-technical, such as coordination and communication. Workforce development requires policies and funding to recruit, train, maintain and mobilize competent human resources and requires an "enabling" work environment, which includes minimal staff turnover and maintained motivation to ensure the highest-quality work. Economic and socio-structural issues including gender, culture and rural–urban differentials are considered *(4,5)*.

The conceptual approach used as the basis for the WFD OT comprises four interlinked actions (Fig. 3).

Fig. 3. Conceptual approach for the WFD OT
Source: adapted from WHO (2).
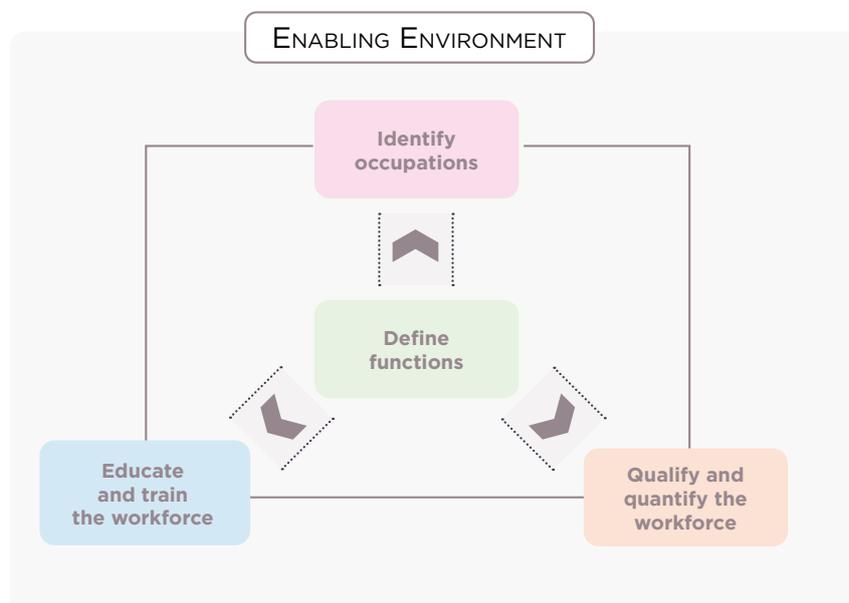
• **Define workforce functions.** Workforce functions include the duties and responsibilities most relevant to management of zoonotic diseases using a One Health approach.

• **Identify occupations.** Determine the existing and missing occupations necessary for fulfilling all relevant functions. Once identified, their titles can be compared with those listed in the International Standard Classification of Occupations 2008 *(6)* to enable comparisons among countries.

• **Identify existing and missing competencies.** Understand which competencies are required for each function. Then identify if those competencies are adequate among the responsible occupations or if they need strengthening.

• **Educate and train the workforce.** The relevant competencies can be strengthened by education and training, which should be both sector-specific and cross-sectoral and reflect the functions relevant for management of zoonotic diseases.

• **Ensure that human resources are available.** Countries can map and measure the geographical distribution of occupations to ensure equitable delivery of functions. By addressing labour market challenges, countries can ensure a supply of qualified personnel to meet the demand, equitable distribution, appropriate reimbursement and policies and legal frameworks for safe, fair, effective practice of the identified functions.

The process begins with defining the existing and needed workforce functions to manage zoonotic diseases in the country. Users of the tool then elaborate on the existing and needed occupations and competencies to perform the functions at institutional level. Agencies are also considered institutions in this context. The competencies of personnel both in an institution and outside are assessed to determine whether they are adequate. Competencies of individuals that are not affiliated with an institution can also be assessed. Global, regional and national trainings and tools are then offered to individuals in institutions to strengthen those competencies. Countries can then evaluate and address aspects of the enabling environment, including the labour market, legislation, institutional structures and mandates and the availability and distribution of human resources according to national and sub-national needs.

Foundational concepts and definitions to contextualize development of a multisectoral workforce

Zoonotic disease management comprises all phases of the management cycle, i.e., prevention, preparedness, detection, response and recovery from outbreaks (7). The concepts and associated resources are the basis for a stepwise, evidence-based process, outlined in the *Global Strategy on Human Resources for Health: Workforce 2030 (4).* The strategy requires sound data and evidence on the health workforce as the backbone of decisions, to have a comprehensive understanding of the health labour market, to have health workforce planning tools and to trigger adequate evidence-based policies. Key terms are defined in Box 3.

> A complete list of terms can be found in *the glossary of terms M11.*

> **Box 3.** Further definitions
>
> **Function:** Sector-specific and multisectoral duty and responsibility to ensure coordinated zoonotic disease management. Functions are performed by the workforce on behalf of an institution *(adapted from 2).*
>
> **Occupation:** The kind of work performed in a job. The concept is defined as a "set of jobs whose main tasks and duties are characterized by a high degree of similarity". A person may be associated with an occupation according to the main job currently held, a second job, a future job or a job previously held *(6).*
>
> **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, by the expression of behaviour, measurable *(8).*

Alignment with the One Health Joint Plan of Action

The WFD OT is aligned with the Quadripartite *One Health Joint Plan of Action* *(9)* and its associated national-level *implementation guide* *(10)*. The WFD OT can be used by countries to operationalize pathway 2 of implementation for organizational and institutional development, specifically to manage zoonotic diseases, and can be adapted to address other One Health priorities. It can also be used to operationalize Action Track 1 to enhance One Health capacities to strengthen health systems; Action Track 2 to reduce the risks from emerging and re-emerging zoonotic epidemics and pandemics; and Action Track 3 to control and eliminate endemic zoonotic, neglected tropical and vector-borne diseases. Application of the WFD OT using these foundational concepts and definitions is described below.

Overview

Objectives

To support countries in planning and strengthening a multisectoral workforce for effective management of zoonotic disease using a One Health approach by strengthening the appropriate functions, occupations and competencies across relevant sectors and disciplines for challenges at the human–animal–environment interface. The specific objectives include:

- identifying the existing and needed multisectoral, One Health functions, occupations and competencies for effective zoonotic disease management in the country;
- assessing functions and associated competencies at institutional level;
- identifying global, regional and national competency-based education and training options and tools to address the functions, occupations and competencies that require strengthening;
- recommending resources and tools to address challenges in the enabling environment; and
- integrating the results into national workforce plans.

Target users

The target users of the WFD OT are in all sectors of government relevant to zoonotic disease management at all administrative levels, from national to local levels, including human resource personnel, trainers and educators. The target users of the WFD OT are described in module 1. Both participants of workshops and users of the online format of the tool are referred to as "users" throughout the document.

Scope

The scope comprises the institutional functions, occupations and competencies required for coordination of zoonotic disease management at the human–animal–environment interface (Fig. 4). The competencies of personnel in institutions are assessed to determine whether the institution has the required competencies for its functions. The tool does not provide guidance on evaluating the performance of individuals who fill the occupations. Training options can be offered to individuals in institutions to strengthen their competencies.

Figure 4. Elements of workforce development covered by the WFD OT (in orange) and the enabling environment for comprehensive workforce development
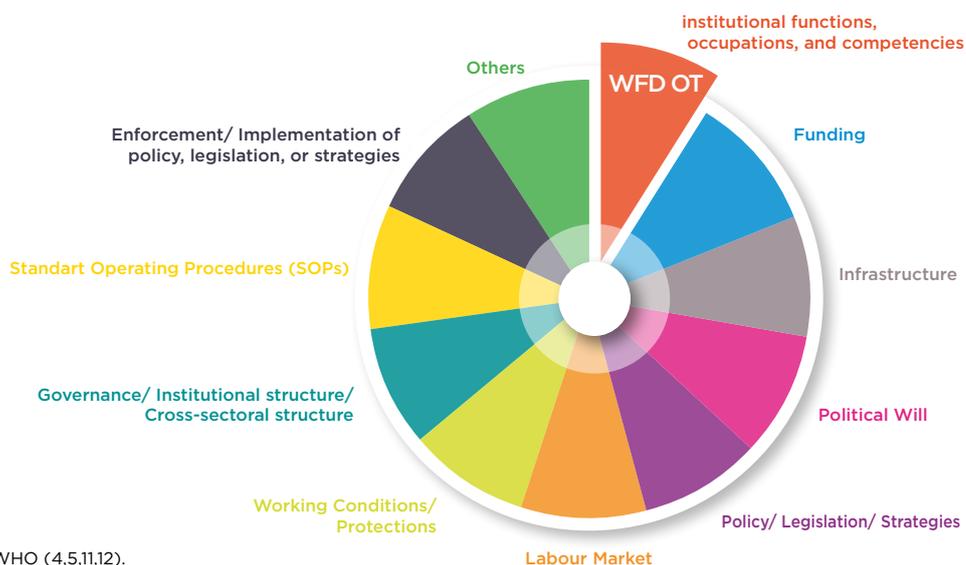
Sources: WHO (4,5,11,12).

The WFD OT addresses the institutional functions, occupations and competencies of workforce development while giving users the opportunity to identify challenges in the enabling environment, represented by the other sections of the pie chart. Resources for addressing the challenges are available that can be tailored to the country's needs in the final module of the tool. The resources are not comprehensive, prescriptive or exhaustive.

Structure and format

This tool guides users through a series of modules consisting of technical steps along a logical pathway, facilitating interactive discussion and progressive identification of inputs, resulting in a report with multisectoral contributions.

The WFD OT can be used entirely online, in an in-person workshop or with online and in-person components components in combination. The WFD OT can be used alone or with other activities for strengthening capacity for management of zoonotic diseases. The structure and the basic approach for using the WFD OT are as follows:

MODULE 1:

Setting up

Step ❶: Generate buy-in and secure agreement to use the WFD OT.

Step ❷: Identify a steering committee, technical team and users.

Step ❸: Conduct a situation analysis and set the scope.

MODULE 2:

Workforce analysis

Step ❹: Select and revise the priority functions of the workforce.

Step ❺: Match and rate occupations to priority functions.

Step ❻: Identify needs and challenges.

Step ❼: Rate competency packages required for priority functions.

MODULE 3:

Sustainable workforce development planning

Step ❽: Identify resources for strengthening competency packages.

Step ❾: Link critical needs, competencies and resources, and initiate the workplan.

Step ❿: Develop or adapt an M&E framework and include it in plan(s).

All modules are self-paced, for both the online format and in-person workshops. It is recommended that module 1 (high-level buy-in) be conducted approximately 3 months in advance to ensure adequate user engagement in module 2.

In-person workshop specifications and timeline

The specifications proposed for in-person workshops are:
- be conducted over 3 days (see also timeline for completion, below);
- training-of-trainers be conducted for national facilitators 1 day before the workshop;
- workshop supplies as described in steps 2.1–2.3;
- invitations to observers from other countries interested in engagement with WFD OT;
- one facilitator, one notetaker and one interpreter (if necessary) for each breakout group; and
- arrangements for translation of materials and interpretation if necessary.

It is recommended that steps 1–3 be conducted before the workshop and steps 4–9 during the workshop. Step 10 is introduced during the workshop and conducted after the workshop. The recommended timeline for WFD OT engagement is shown in Fig. 5. If hybrid workshops are organized, it is recommended that facilitators monitor online participation and facilitate online breakout groups. A training-of-trainers for national facilitators is recommended on site the day before the workshop begins. Analysis of the results of the workshop and preparation and validation of the report usually require at least 2 weeks.

Fig. 5. Recommended timeline for an in-person workshop

- 3 months	Buy-in	Webinar for high-level decision makers	Webinar or environment sector participants	Establish steering committee and technical team	Begin situation analysis	Begin analysis of ToRs for functions (Optional)
- 2 months	Translation of materials (as needed)	Finalize participant and facilitator lists	Distribute participant and facilitator manuals	Start regular planning calls with technical team	Recommended that 2 national counterparts are dedicated to the workshop process.	
- 1 month	Review technical materials with facilitators and participants					
Workshop	1 day training-of-trainers	3-day workshop				
+2 weeks	Workshop report	Integration into workforce planning				

Timeline for use of the online format

While the timeline for the online format is considerably more flexible and can be conducted at the pace defined by the steering committee and technical team, it is recommended that all steps be completed within 6 months to maintain relevance of the data.

Roles and responsibilities

Use of the WFD OT involves up to five roles, with the following responsibilities (one individual may be assigned more than one role):
- a participant or user who engages in discussions and data entry at each step;
- a facilitator for group discussions and exercises;
- a notetaker to document the outcomes of group work and discussions;
- a technical team member to facilitate the WFD OT process, conduct the situation analysis and set the scope, receive direction and report back to decision-makers; members may also

be participants/ users, facilitators, or notetakers;

- a steering committee member to provide direction and guide the scope and objectives of use of WFD OT and advice on funding and sustainability for continued engagement; may choose to nominate a lead coordinator or focal point to supervise and work with the technical team.

After completing the WFD OT, countries will have the following concrete outputs:
- a list of workforce functions for effective zoonotic disease management;
- priority workforce functions to be strengthened;
- a list of occupations relevant to zoonotic disease management;
- analysis of needs and challenges in functions, occupations, competencies and the enabling environment;
- competency packages to strengthen in institutions;
- a list of recommended training options to strengthen competency packages;
- a plan for strengthening the workforce, including tools to address challenges in the enabling environment; and
- a final report that includes information for possible inclusion in official workforce strategies and plans, with:
  - qualitative data on the workforce in all sectors;
  - recommended trainings to strengthen workforce competencies; and
  - options for addressing challenges in the enabling environment.

Resources required

Dedicated personnel: It is recommended that at least two national counterparts be dedicated to the WFD OT process, including preparation, facilitation, drafting of the report and follow-up.

Internal documents: Sector-specific and multisectoral workforce assessments, labour market analyses relevant to the multisectoral workforce (i.e. human health, animal health, environment sectors), workforce strategies and plans, current priority zoonotic diseases in the country and organograms for the situation analysis (see step 3, below).

Materials: A complete list of critical and supporting material is provided in Annex 1 for in-person workshops and in Annex 2 for virtual exercises. Materials are compiled in a compendium, and links to individual files are available online for download. Details on how and when the materials should be used are summarized in the e *WFD steps and materials list (M08).*

Module 1

Setting up

Step 1: Generate buy-in and secure agreements to use the WFD OT

Fig. 6. Step 1 (Module 1) "Generate buy-in, and secure agreement to use the WFD OT" is highlighted in the pathway of the WFD OT.
Source: adapted from WHO (2)
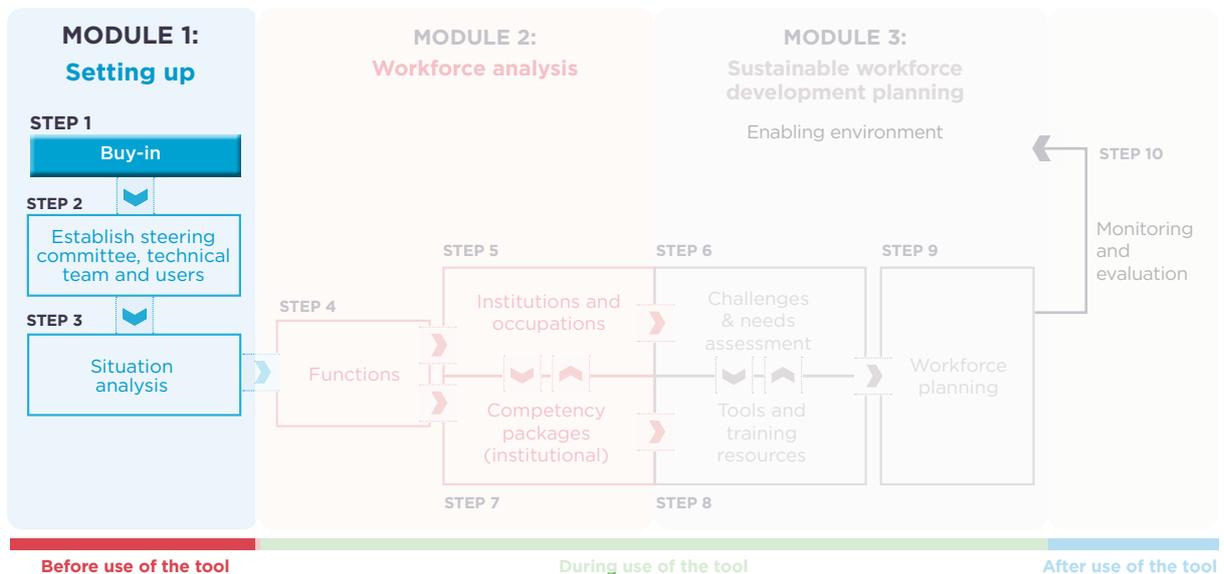
Step 1 should be initiated about 3 months before planned use of the tool. Delegates and decision-makers in relevant ministries across sectors and disciplines are encouraged to discuss the needs and interest of the country to engage with the WFD OT.

The WFD OT factsheet (M01) and *introduction to WFD OT* PowerPoint presentation *(M02)* can be useful, and informational webinars could be conducted to facilitate this process. *A template workshop concept note and agenda (M03)* and *a template webinar concept note and agenda (M04)* are provided among the materials for both an informational webinar and a WFD OT workshop. Buy-in should be generated in all sectors relevant for One Health, including decision-makers in public health, animal health and environment and wildlife sectors. It is recommended that relevant decision-makers and stakeholders have basic literacy about One Health before using the WFD OT.

Materials to be used:

- *M01 WFD OT factsheet*
- *M02 Introduction to WFD OT* PowerPoint presentation
- *M03 Template workshop concept note and agenda*
- *M04 Template webinar concept note and agenda*

Materials to be used:

- *M05 Introduction to One Health PowerPoint presentation*
- *M06 Role of the environment and wildlife professionals in One Health*

National delegates and decision-makers are responsible for identifying sustainable funding for implementation of the recommendations generated by use of the WFD OT. Sustainability requires dedicated human resources and finances in the long term. It is recommended that agreement be secured from appropriate high-level leaders authorized to commission use of the tool and follow-up activities such as monitoring and evaluation (M&E). High-level leaders should work with the necessary structures or mechanisms to advocate for use of the WFD OT, obtain agreement from all parties to use WFD OT to strengthen workforce competences and establish a steering committee and technical team. Leaders are advised to consult the *National health workforce accounts: implementation guide (13)* for further guidance on government "buy-in", governance, scoping and planning.

A legal framework could be established to ensure sustainable implementation and monitoring. The tool should therefore be integrated into national workplans and priorities. Legal frameworks can be referred to in order to maintain political will and engagement of relevant stakeholders and sectors throughout use of the WFD OT.

> Materials for step 1 (see Annexes and Compendium of materials):
> • the WFD OT factsheet (M01) (critical),
> • the "Introduction to WFD OT" PowerPoint presentation (M02) (critical),
> • the template workshop concept note and agenda (M03) (critical),
> • the template webinar concept note and agenda (M04),
> • the "Introduction to One Health" PowerPoint presentation (M05) and
> • the text of the "Role of environment and wildlife professionals in One Health" (M06).

Step 2: Identify a steering committee, technical team and users

Fig. 7. Step 2 (Module 1) "Identify steering committee, technical team, and users" is highlighted in the pathway of the WFD OT. *Source: adapted from WHO (2)*
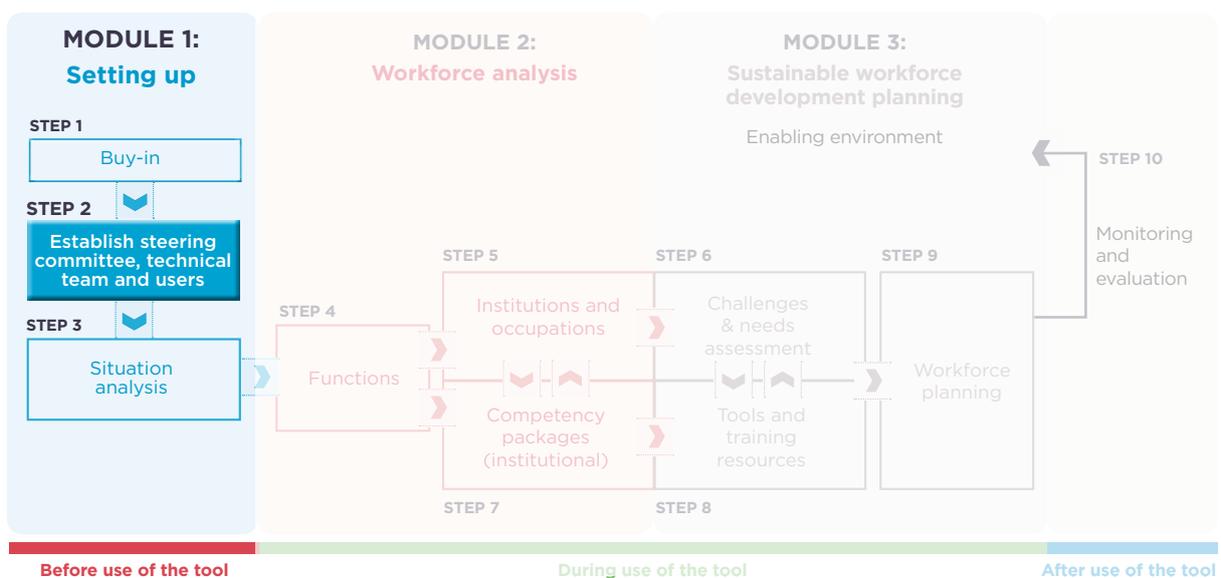
Step 2.1. Identify a steering committee and technical team

Delegates and decision-makers in ministries will identify a steering committee consisting of at least one member from each of the four sectors or more. They should be in the upper management of their ministries. The steering committee will:

- assign members to the WFD OT technical team,
- guide the scope and objectives of use of WFD OT and
- advise on funding streams and sustainability for continued engagement with the WFD OT.

The steering committee may consider using a multisectoral coordination mechanism, if in place, for establishing the technical team. They may choose to nominate a lead coordinator or focal point to supervise and work with the team.

The technical team consists of a small group of experts in human health, animal health, the environment and wildlife. It is recommended that at least two national experts be nominated to be responsible for preparation, facilitation and follow-up. The team will:

> Material to be used:
> *M07 Terms of reference*

- manage the timing for completion of the WFD OT;
- identify and select users, ensuring appropriate multisectoral participation;
- conduct advocacy and outreach to relevant stakeholders, including environment and wildlife professionals, to secure their engagement;
- direct and conduct the situation analysis, and set the scope;
- analyse job descriptions in participating sectors to identify functions (optional);
- facilitate use of the WFD OT and workshop;
- receive direction and report to the steering committee (i.e. high-level decision makers);
- validate the final report;
- incorporate the report into workforce strategies and plans, and identify other uses of the outputs; and
- support M&E (optional).

> It is recommended that the technical team use the *template workshop concept note and agenda (M03)*, the *WFD steps and materials list (M08)* and the *facilitators' manual (M09)* to develop the scope, rationale, and timeline for use of the WFD OT and for validation and integration of results into national workforce strategies and plans

The technical team may consider consulting any existing One Health multisectoral coordination mechanism, platform or task force for optimizing performance and harmonization of the work.

> Materials for step 2.1 (see Annexes and Compendium of materials):
> - the template workshop concept note and agenda (M03) (critical),
> - the terms of reference for the technical team (M07),
> - WFD steps and materials list (M08) (critical) and
> - the facilitators' manual (M09) (critical*).

Step 2.2. Identify and invite users of the WFD OT

The WFD OT technical team is responsible for identifying users of the WFD OT, whether in in-person workshops or online format. Users are primarily government authorities in ministries of health, agriculture and the environment or equivalent, depending on the country, and other sectors with functions relevant to zoonotic disease management, including human resource personnel, trainers and educators. Users are expected to be aware of the workforces and workforce plans in national and/or subnational human, animal, environment and wildlife sectors. Users should include both women

> Material to be used:
>
> *M10 Guidance for user representation*

> The *WFD OT factsheet (M01),* the *template concept notes and agendas (M03, M04),* the *Introduction to One Health* PowerPoint presentation *(M05),* the text on the *Role of the environment and wildlife professionals in One Health (M06)* and *glossary of terms (M11)* can be used to advocate for participation of environment and wildlife professionals

and men, who should understand the capacities required for national and subnational authorities in zoonotic disease management, such as public health officers, nurses, veterinary public health officers, veterinary paraprofessionals, community workers in animal health and environment officers. The technical team is encouraged to be inclusive in selecting participants, ensuring the participation of qualified, diverse profiles, including women.

Usually, one to three users in relevant ministries are designated to:

- compile relevant input on the workforce in their sector;
- participate in a workshop or complete the WFD OT tool online;
- work with other users to finalize the report; and
- present the report to the technical team for validation.

Users can meet virtually or in person to finalize and harmonize sector-specific inputs

Materials for step 2.2 (see Annexes and Compendium of materials):
- the WFD OT factsheet (critical) (M01),
- the template workshop concept note and agenda (M03) (critical),
- the template webinar concept note and agenda (M04),
- *the Introduction to One Health* PowerPoint presentation (M05),
- *Role of the environment and wildlife professionals in One Health* text (M06),
- guidance for user representation (M10) and
- glossary of terms (M11).

Step 2.3. Organize and plan engagement with the tool

The technical team is responsible for organizing and planning user engagement with the tool. The *facilitators' manual (M09)* is available to support the technical team to prepare for user engagement with the tool. Users of the tool are encouraged to prepare their engagement by consulting the *preparatory checklist for users of the tool (M12)*. The online format requires coordination of users to advance with each module and exercise.

Materials to be used:

- *M09 Facilitators' manual is available to support the technical team to prepare for user engagement with the tool.*
- *M12 Preparatory checklist for users of the tool*

Planning for workshops includes securing a venue, supplies, equipment and interpretation and arranging the travel and accommodation of participants if necessary.

A list of workshop supplies (M13) is available in the list of materials. *Day 1 PowerPoint presentation (M14), Day 2 PowerPoint presentation (M15),* and *Day 3 PowerPoint presentation (M16)* are also available to support facilitators for each day of in-person workshops. These presentations can be adjusted for the online format of the tool.

Materials for step 2.3 (see Annexes and Compendium of materials):
- facilitators' manual (M09)
- preparatory checklist for users of the tool (M12),
- list of workshop supplies (M13),
- Day 1 PowerPoint presentation (M14) (critical),
- Day 2 PowerPoint presentation (M15) (critical) and
- Day 3 PowerPoint presentation (M16) (critical).

Step 3: Conduct a situation analysis and establish the scope

Fig. 8. Step 3 (module 1), Conduct a situation analysis and set the scope, is highlighted in the pathway of the WFD OT.

Source: adapted from WHO (2)
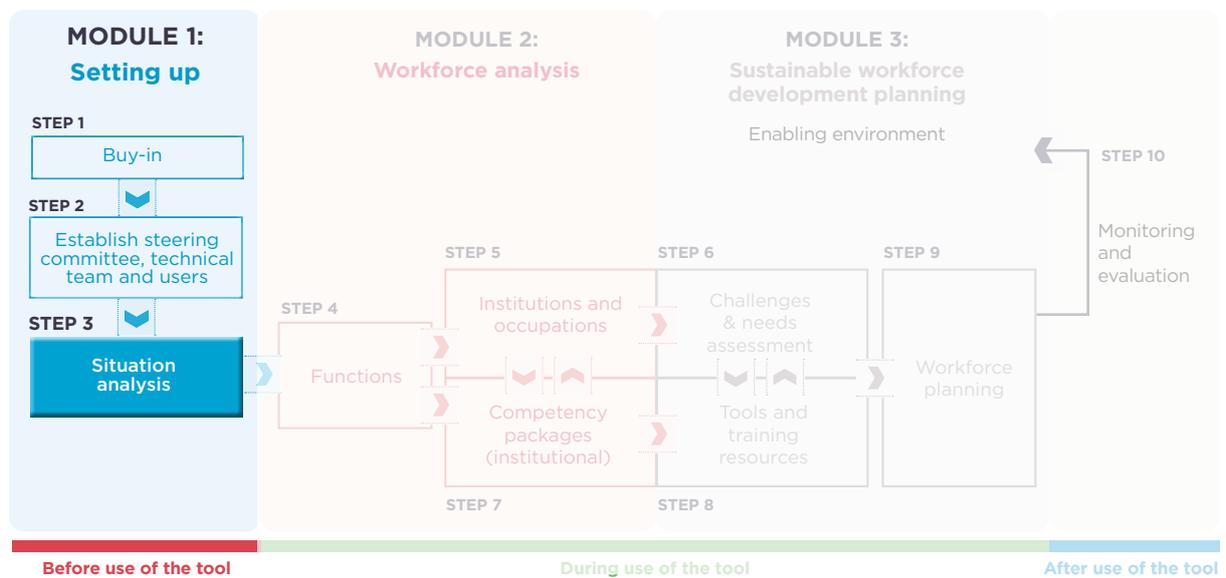
The technical team should conduct a situation analysis, which consists of four recommended and one optional component. Any sector-specific and multisectoral workforce assessments, documentation of priority zoonotic diseases and One Health priorities, and any One Health policies or frameworks for cross-sectoral collaboration should be considered. The scope of use of the tool can then be determined as either national or both national and subnational.

> **Materials to be used:**
>
> • *M17 Guidance for a situation analysis, PowerPoint presentation*
> • *M18 Guiding questions*
> • *M19 Template for countries' presentations*
> • *M20 Tutorial video on situation analysis and setting the scope*

The results of the situation analysis confirm that the outcomes of the WFD OT are adapted to the national context and are coherent with global workforce planning and with M&E.

Step 3.1 Situation analysis

Collate the results of completed workforce assessments.

The first recommended component of the situation analysis is to identify and collate the results of completed workforce assessments. Non-exhaustive lists of processes and tools with components of a workforce assessment are provided below.

Tools and processes developed by FAO, WHO, or WOAH:

- FAO environment sector mapping and needs assessment[1]
- Field Epidemiology Training Programme for Veterinarians; In-Service Applied Veterinary Epidemiology Training needs assessments[2]
- *Health Labour Market Analysis (11)*
- *Joint External Evaluation (14)*

- *International Health Regulations (2005) State Party Self-Assessment Annual Report (15)*
- *National Health Workforce Accounts (16)*
- *Performance of Veterinary Services Pathway (17)*, which includes *Veterinary service evaluation, Gap analysis and Veterinary paraprofessional curricula analysis mission*
- WOAH sector-specific workforce assessment tool[3]

Tools and processes developed by organizations or institutions other than FAO, WHO or WOAH:
- *Capacitating One Health in Eastern and Southern Africa (18)*
- *Global Health Security Agenda – Workforce Development Action Package (19)*
- *ILO guidelines on rapid assessment of reskilling and upskilling needs in response to the COVID-19 crisis (20)*
- *Organisation for Economic Co-operation and Development (21)*
- *Malaysia One Health University Network (22)*
- *One Health Workforce Next Generation (23)*
- *Workforce Assessment Toolkit (24)*
- *One Health Systems Mapping and Analysis Resource Toolkit (25)*
- *One Health Education and Training Frameworks (26)*
- *Southeast Asia One Health University Network (27).*

Examples of other processes, tools and programmes that may include components of workforce planning and assessment are listed below. Review of such programmes and the results and of use of the tools may be useful for understanding various aspects of the workforce.
- *Competencies for One Health Field Epidemiology Framework (28)*
- *Field Epidemiology Training Programme (29)*
- *In-Service Applied Veterinary Epidemiology Training (30)*
- *Joint Risk Assessment Operational Tool (31)*
- *National Bridging Workshops (32)*
- *Response Preparedness Programme (33)*
- *Surveillance and Information Sharing Operational Tool (34)*

Countries may find other sources. Information relevant to zoonotic disease management at the human–animal–environment interface should be extracted and organized by administrative level for linkage to the results and outcomes of the WFD OT. The technical team should summarize the results to identify and gaps and make recommendations to address such gaps in the *template for countries' presentations (M19)* provided.

> Material to be used:
>
> *M19 Template for countries' presentations*

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1 - FAO environment sector mapping and needs assessment. Food and Agriculture Organization of the United Nations (unpublished).

2 - Field Epidemiology Training Programme for Veterinarians; In-Service Applied Veterinary Epidemiology Training needs assessments. FAO & Texas A&M AgriLife – Institute for Infectious Animal Diseases (unpublished).

3 - WOAH sector-specific workforce assessment tool. World Organisation for Animal Health (unpublished).

Collate workforce plans, policies, strategies and frameworks

The technical team is encouraged to review or undertake a high-level analysis of all areas of the enabling environment, such as the national context, multisectoral collaborative environment and the institutional environment. Examples of the multisectoral collaborative environment could be a framework or policy for a multidisciplinary workforce to work together and share knowledge, political will or policy for in-service cross-sectoral training. Institutional or sectoral areas of the enabling environment may allow flexibility for personnel to work with other sectors, a structure that allows One Health collaboration of human resources, provide a career path for personnel who work collaboratively and continuing education in collaboration.

> The WFD OT technical team should identify national plans, policies, strategies or frameworks, such as national implementation of the *One Health Joint Plan of Action (9, 10)*, that include one or more of the public health, animal health, environment or wildlife workforce.

Parts of the plans that are relevant for managing zoonotic disease should be identified and summarized, and the strengths and challenges of the plans should be identified, such as the extent to which the plans address:

- all aspects of workforce requirements,
- all phases of management and
- the technical areas of the *Tripartite Zoonoses Guide (1)*.

The results can be summarized on the *template for countries' presentations (M19) provided.*

Identify priority zoonotic diseases and/or reports on One Health challenges

The WFD OT technical team is advised to summarize the results of a multisectoral exercise in prioritizing zoonotic diseases conducted in the past 5 years on the *template for countries' presentations (M19)* provided. If no such exercise has been undertaken, a list of priority zoonotic diseases can be generated from a review of publications, reports, grey literature and other sources or lists of reportable diseases, such as:

- *Centers for Disease Control and Prevention One Health Zoonotic Disease Prioritization Process tool (35)*,
- *Integrated Disease Surveillance/ Integrated Disease Surveillance and Response (36)*,
- *FAO EMPRES-i: Global Animal Disease Information System (37),*
- notifiable disease reports from ministries of health and of agriculture and
- *World Animal Health Information System Portal: Animal Health Data (38)*.

> All relevant sectors should be consulted for input to the list.

Identify relevant national trainings

National education programmes and trainings should be identified that contribute to development of the workforce to collaborate and coordinate across sectors in technical areas relevant to zoonotic disease management. The inclusion criteria to be considered are:

- the target audience: national and subnational government authorities;
- whether in-person, online, hybrid or a combination;
- whether non-degree courses and trainings provide a certificate or similar based on performance to ensure that competencies have been strengthened; and
- in-service training should be feasible.

Both government and non-government trainings, such as from academic institutions, professional associations and continuing education boards, should be considered.

The types of competencies provided by education programmes and trainings should be compared with the requirements of the workforce. The technical team could conduct a gap analysis of trainings by the WFD OT competency package and language. Programmes and trainings could be updated or built upon to ensure sustainability and cost-effectiveness before they are introduced into workforce planning. The findings can be summarized in *the template for countries' presentations (M19).*

> More information is provided in module 2, *framework of competency packages and competencies.*

> 🖹 Material to be used:
>
> *M19 Template for countries' presentations*

Identify and collate information on occupations (optional)

The technical team could identify and collate information on occupations involved in zoonotic disease management in various sectors, such as from official national workforce documents and official organograms for each sector. Such documents may include the types, qualifications, numbers and locations of the workforce in the country.

> 🖹 Materials to be used:
>
> • *M27 The team could consult the list of suggested WFD OT occupations by sector*
> • *M29 Example tasks by occupation*

An analysis of the terms of references of relevant authorities in each sector can help to understand their functions and their distribution in the country.

Step 3.2 Set the scope

The scope of the workforce to be assessed in the WFD OT is defined by the technical team by answering the guiding questions below.

> 🖹 Material to be used:
>
> *M18 Document with guiding questions*

Guiding questions:

- Does your country have a workforce plan or strategy for zoonotic disease management or for other One Health areas?

- Describe the roles and involvement of wildlife and environment sectors in the management of zoonotic diseases in your country.

- Describe the current capacity of the national workforce to coordinate sectors and disciplines to manage zoonotic diseases.

- Describe the workforce competencies that should be further strengthened according to the review of the workforce assessments and strategies for a One Health approach to zoonotic disease management.

The technical team establishes whether the scope shall be national or both national and subnational. As an assessment of the subnational workforce is based on the context of the national workforce, it is recommended that the scope of the WFD OT be defined for the national workforce with the option of including subnational workforces.

> 📖 Materials for step 3 (see Annexes and Compendium of materials):
> • guidance for a situation analysis, PowerPoint presentation (M17) (critical),
> • guiding questions (M18) (critical),
> • template for countries' presentations (M19),
> • tutorial on situation analysis and setting the scope (M20), video, and
> • for optional steps;
>   - WFD OT functions (M24)
>   - WFD OT occupations (M27)
>   - example tasks by occupation (M29)
>   - framework of competency packages and competencies (M32)

Module 2

Workforce analysis

Users begin module 2 under the guidance of the technical team. The steps in this module are adapted from _Essential public health functions: a guide to map and measure national workforce capacity (39)._

By this time, users should have completed the _preparatory checklist for users of the tool (M12)_

Step 4: Select and revise the priorities of the workforce

Fig. 9. Step 4 (module 2), Identify and prioritize functions of the workforce, is highlighted in the pathway of the WFD OT. _Source: adapted from WHO (2)_
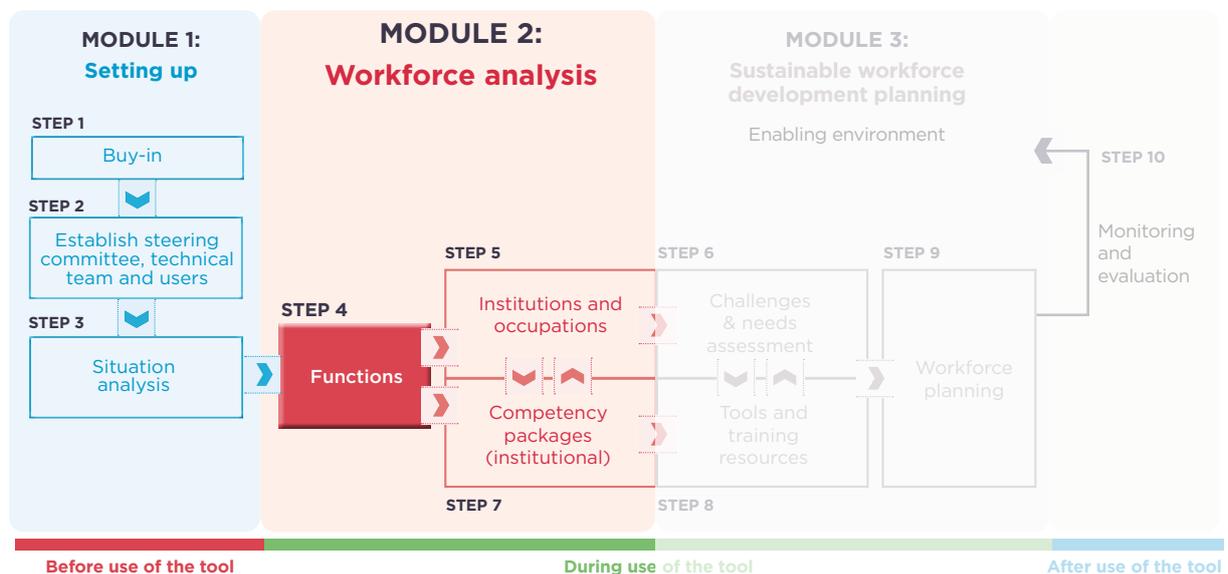
Step 4 marks the beginning of user engagement with the WFD OT. The _WFD OT functions (M24)_ are designed for the technical areas listed in the _Tripartite Zoonoses Guide (1)_. The functions were identified by both a literature review and by expert consultation. The 36 functions associated with intersectoral collaboration and coordination are grouped into eight categories:

Material to be used:

M24 WFD OT functions

- strategic planning and emergency preparedness, 10 functions;
- surveillance and information-sharing, 7 functions;
- coordinated investigation and response, 5 functions;
- joint risk assessment, 1 function;
- risk reduction, risk communication and community engagement, 6 functions;
- research, 2 functions;
- workforce development, 3 functions; and
- M&E, 2 functions.

The first exercise for users is to walk through a scenario of a zoonotic disease outbreak, during which they identify the sector-specific and multisectoral functions for managing the event. Sector-specific functions are typically technical, while multisectoral functions are non-technical, such as coordination and communication.

The objective of the exercise is to help users in understanding the functions necessary for zoonotic disease management and especially those required for coordination among sectors and disciplines.

In mixed-sector groups, users are asked to read through the *exercise 1 part 1 disease scenarios (M21)* provided in the list the materials and then to review the *WFD OT functions (M24)* (provided as index cards if in-person) at the interface between sectors and place them into the above categories. Users can refer to the *WFD OT sub-functions (M26)* for further clarification of the functions. The exercise should be completed according to the current national situation and not an ideal situation. Users can also compare the functions with the *WFD OT functions (M24)* to identify consistency and gaps. A comparative analysis of functions may have already been conducted in the situation analysis.

Materials to be used:

• *M21 Exercise 1 part 1 disease scenarios*
• *M24 WFD OT functions*
• *M26 WFD OT sub-functions*

The exercise complements the <u>*Response Preparedness Programme (33)*</u> and the Coordinated Investigation and Response Operational Tool[4], if conducted. Countries may also choose to use reports from simulation exercises, after- and intra-action reviews, zoonotic disease management manual(s), guideline(s) or framework(s) in the country or similar reviews to identify relevant functions.

In the next part of the exercise, users select priority functions from the list of *WFD OT functions (M24)* and revise them. Each country is unique in terms of how health (human, animal, the environment and wildlife) and social services are organized and therefore how the functions are delivered.

The result of the group exercise is identification of priority functions. In the following plenary session, consensus is reached, and five to ten priority functions are selected for the subsequent steps. The functions are selected not only according to their importance but also to requirements and the urgency of strengthening capacity and competency. The national agenda, the International Health Regulations (2005) assessment scores and pandemic instrument proposals can be used to identify priority functions. The WFD OT process can be repeated for additional functions if necessary. At the end of Step 4, a list of five to ten priority functions should be available as a concrete output.

Materials for step 4 (see Annexes and Compendium of materials):
• exercise 1 part 1 disease scenarios (M21) (critical),
• workforce function list_cards for exercise 1 (M22),
• exercise 1 part 1 posters (M23),
• WFD OT functions (M24) (critical),
• exercise 1 part 2 template (M25),
• WFD OT sub-functions (M26) and
• preparatory checklist for users of the tool (M12)

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4   WHO, FAO, WOAH. Coordinated Investigation and Response Operational Tool. World Health Organization (unpublished).

Step 5: Match and rate occupations to priority functions

Fig. 10. Step 5 (module 2), Match and rate occupations to priority functions, is highlighted in the pathway of the WFD OT

Source: adapted from WHO (2)
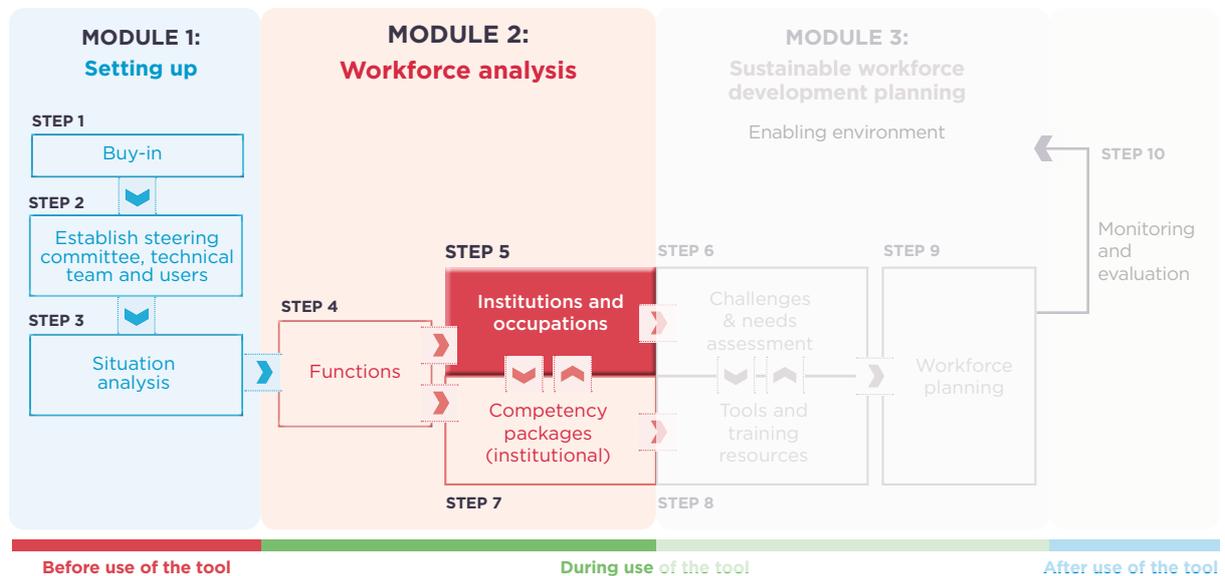
In this step, users work in sector-specific groups. Once the priority functions are identified, users can consider the occupations in their institution or sector that are responsible for delivering the functions. To facilitate the exercise, users are given a list of suggested *WFD OT occupations (M27)* by sector, which was drawn up through a literature review and expert consultation. Each relevant occupation can be matched to a corresponding International Standard Classification of Occupations code *(6)*.

> **Materials to be used:**
> • *M27 WFD OT Occupations*
> • *M29 Example tasks by occupation*

Users can then review, remove and add missing occupations at institutional level as necessary using the *exercise 2 part 1 template (M28). Example tasks by occupation (M29)* is available to help users in identifying the corresponding occupational title.

Users then work on a sector-specific *matrix for matching occupations and functions (M30)*. In the workshop format of the tool, a flip chart is used, with the priority functions written on the left and the revised occupations of interest in the top rows (Fig. 10). Each sector qualitatively assesses priority functions by responsible occupations based the expected level of engagement (i.e., part-time vs. full-time) of that occupation according to the following colour codes:

- **Green** The function is **fully delivered** by the occupation

- **Yellow** The function is **adequately delivered** by the occupation

- **Red** The function is **not adequately delivered** by the occupation

For occupations that are irrelevant or not applicable, the cells are left blank or coloured gray.

Fig. 11. Mock-up matrix for matching and rating of occupations and functions

Functions/Occupations	Chair of the multisectoral collaboration mechanism (MCM)	Chief veterinary officer or equivalent director of veterinary services (gov)	Finance officer	Human resource manager	Supply/ Inventory/ Logistic officer (gov)	Program/ Project manager	Outbreak response coordinator (gov)	Biostatistician	Veterinary Epidemiologist	Microbiologist
Coordinate zoonotic disease management using a defined framework and/ or multisectoral coordination mechanism										
Supervise / oversee the coordination of activities conducted at the interface among sectors for the management of zoonotic diseases										
Jointly identify relevant stakeholders and involve them in zoonotic disease management		[green]		[yellow]		[red]				
Lead the development and organisation of joint simulation exercises							[green]			[yellow]
Lead the development and organisation of joint after-action reviews			[green]	[green]					[red]	
Represent your agency when engaging with partners and representatives from other agencies and sectors	[red]						[yellow]			
Disseminate information and provide updates within the multisectoral coordination mechanism or to relevant partners on coordinated activities		[yellow]				[green]				

It is expected that some functions will be covered by several occupations or that some functions are less well-resourced or are not usual in the country. Users are encouraged to discuss their own occupations and functions when completing the matrix. *This exercise allows identification of areas for potential revision of terms of references, representation of occupational titles or training of personnel, or other needs by occupation or function in the indicated institutions.*

Sector-specific group results can be shared and discussed to ensure that all relevant occupations are accounted for. At the end of step 5, a list of occupations relevant to priority functions in zoonotic disease management in each sector should be available as a concrete output.

Materials for step 5 (see Annexes and Compendium of materials):
• WFD OT occupations (M27) (critical),
• exercise 2 part 1 template (M28),
• example tasks by occupation (M29) and
• matrix for mapping occupations and functions by sector (M30)

Step 6: Identify the needs and challenges of the workforce

Fig. 12. Step 6 (module 2), Identify needs and challenges in the pathway of the WFD OT, is highlighted in the pathway of the WFD OT
Source: adapted from WHO (2)
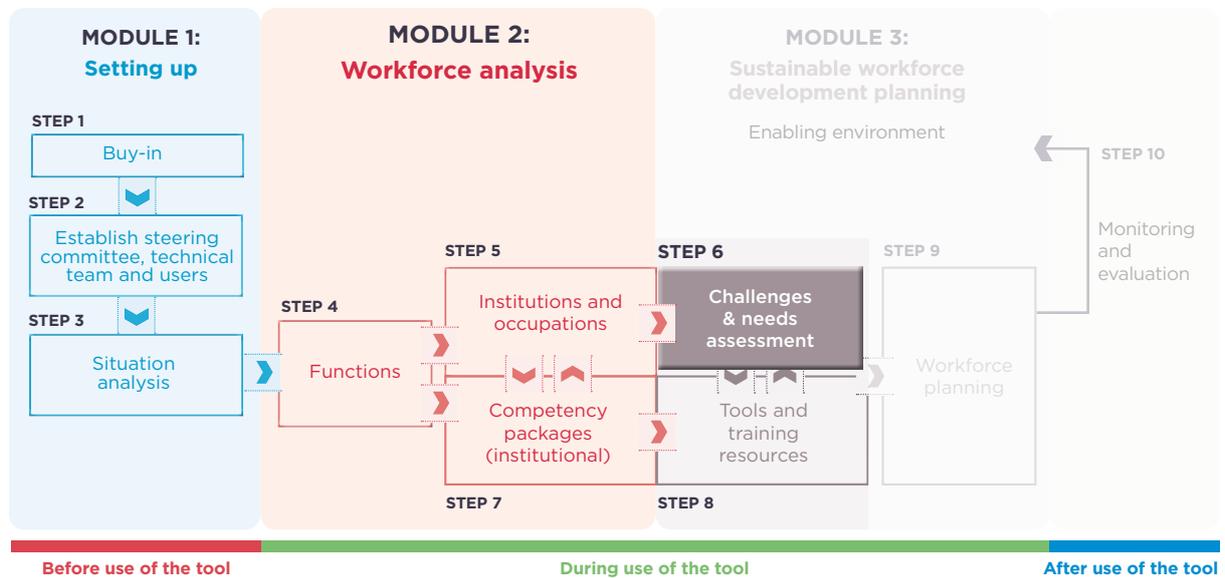
The exercises in steps 4 and 5 are expected to raise discussion on challenges to the workforce and in the enabling environment for functions and occupations. Users, organized by sector, are prompted to follow up the exercises by identifying needs, challenges, barriers and opportunities (see Box 4), particularly for those areas marked in red in the previous exercises. Requirements, challenges, barriers and opportunities are noted on a flip chart.

List of needs and challenges for facilitators and notetakers (M31)

Box 4. Needs, challenges, barriers and opportunities associated with workforce functions, occupations, competencies and the enabling environment

Facilitators and notetakers can guide the discussion in categories

Needs and challenges addressed by the WFD OT:

- institutional functions such as duties and responsibilities, job description, terms of reference;
- institutional occupations, such as jobs titles;
- competencies of personnel in the institution;
- training activities; and
- others.

Workforce needs and challenges in the enabling environment

- policy, legislation, strategies;
- standard operating procedures;
- enforcement of policy, legislation or strategies;
- governance, institutional structure, cross-sectoral structure;
- infrastructure (e.g. building, laboratory);
- funding;
- political will;
- labour market (number and geographical distribution of personnel);
- occupation safety and health;
- working conditions and protections and
- others.

Resources to address the needs and challenges identified at this step are provided in step 9 (module 3). Users could use documentation of needs and challenges as evidence for discussing workforce development in other forums. They can continue to refer to and add to this template as they proceed to step 7.

Material for step 6 (see Annexes and Compendium of materials):
- List of needs and challenges for facilitators and notetakers (M31) (critical)

Step 7: Rate competency packages required for priority functions

Fig. 13. Step 7 (module 2), Rate packages of competencies required for priority functions in the pathway of the WFD OT, is highlighted in the pathway of the WFD OT   *Source: adapted from WHO (2)*
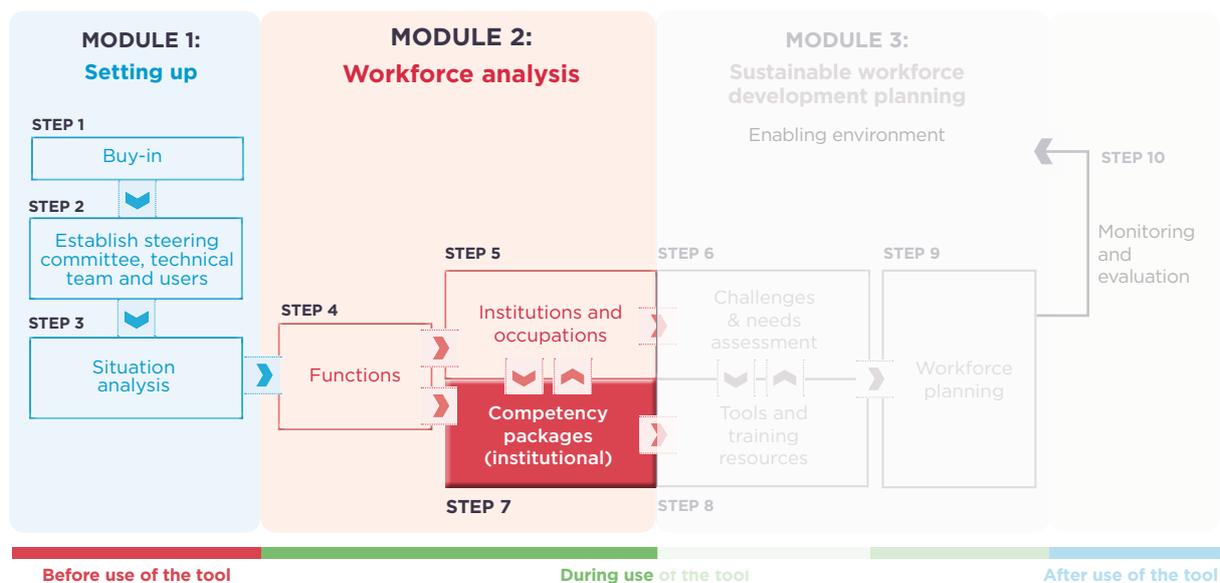
In this step, users can also rate competency packages by occupation at institutional level. They consider the packages required to cover each of the priority functions identified in step 4.

Background to the WFD OT Framework of Competency Packages

The definition of a competency used in the WFD OT is as follows: 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, by the expression of behaviour, measurable (8). Fig. 14 illustrates the definition of competency.

Fig. 14. Competency is the combination of attitudes, skills and knowledge that can be assessed from behavioral indicators. *Source: adapted from WHO (40)*
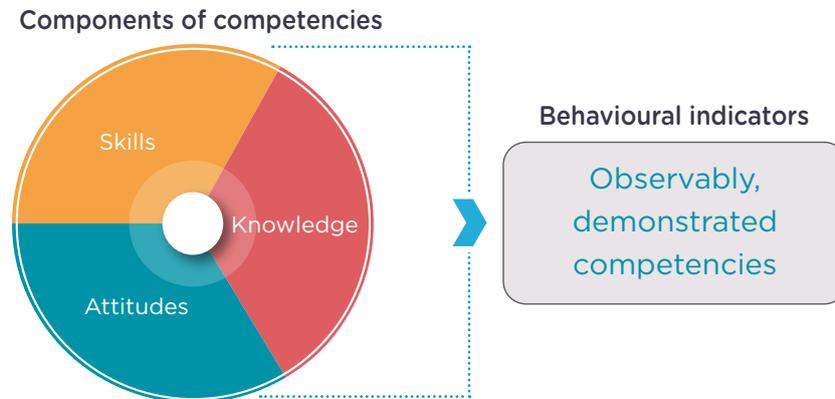
The *framework of competency packages and competencies (M32)* was developed by consultation with relevant frameworks and experts. The inclusion criteria for resources on competencies included their relevance to One Health, public health, animal health or environment health; applicability to the management of zoonotic diseases; and published by 2012 or later. Competency frameworks that have since been updated into more recently published frameworks such as the *Advancing One Health: Updated core competencies (41)* and the *Field Epidemiology Training Programme for Veterinarians framework (42),* were excluded.

> Material to be used:
>
> *M32 Framework of competency packages and competencies*

About 1700 competencies in 23 frameworks that met the inclusion criteria were consolidated and simplified into 133 competencies, which were further consolidated into 36 competency packages. The WFD OT framework complements existing frameworks by consolidating them in a more comprehensive, simplified, broader framework. For example, *WFD OT framework (M32)* includes both field epidemiology competencies, such as those of the *Competencies for One Health Field Epidemiology framework (28)* and *laboratory leadership competencies in the Laboratory Leadership Competency Framework (43)*. As the *OIE Competency Guidelines for Veterinary Paraprofessionals (44)* is specific to the occupation of veterinary paraprofessionals, it is recommended that those engaged in the WFD OT for veterinary paraprofessionals refer to this framework directly. All users of the WFD OT are encouraged to refer to the source frameworks for more details and information.

The 36 competency packages with 133 competencies are further categorized into technical and non-technical competency packages. The non-technical competency packages are relevant for all personnel in all sectors and disciplines associated with zoonotic disease management, regardless of the mandate, functions and occupations in the institution. The technical competency packages may be relevant for personnel across sectors and disciplines according to the mandate, functions and occupations in the institution. This categorization of competency packages can be used to identify appropriate target audiences for trainings and emphasizes the importance of both categories of competence for One Health work.

Assessment of competency packages by function

In this step, users are asked to assess competencies at institutional level and to review how they support implementation of the priority functions. *The competencies of personnel in institutions are assessed to determine whether the institution has the required competencies for its functions.* Training options are then offered to personnel in institutions to strengthen those competencies. The exercise can also be conducted for people who have a role in zoonotic disease management but are not affiliated with institutions, such as community workers and individuals, as required.

Users are presented with a list of competency packages suggested for each function. In the workshop format of the tool, participants receive print outs of a table of priority functions and competency packages (see Fig. 14). They then rate the packages at institutional level for each priority function according to the following colour codes:

- **Green** This competency package is **strong** in the institution(s) to perform the function (e.g., > 75% of the requirement for this competency package is met by the occupation(s) in the institution responsible for this function).

- **Yellow** The competency package is **adequate i**n the institution(s) to perform the function (e.g., 25–75% of the requirement for this competency package is met by the occupation(s) in the institution responsible for this function).

- **Red** The competency package **needs to be strengthened** in the institution(s) to perform the function (e.g., < 25% of the requirement for this competency package is met by the occupation(s) in the institution responsible for this function).

Fig. 15. Table for rating competency packages by priority function

Source: adapted from WHO (40)

Functions/Occupations	Rate The Strength Of Competency Package	Competency Package
Coordinate zoonotic disease management using a defined framework and/ or multisectoral coordination mechanism		Communication and advocacy
	Green	Interpersonal relationships
		Cultural inclusion, diversity, and equity
	Red	Policy
		One Health and Systems Thinking
		Collaboration
	Yellow	Leadership
		Partnerships
	Red	Preparedness Planning
		Communication and coordination in an outbreak
Supervise/ oversee the coordination of activities conducted at the interface among sectors for the management of zoonotic diseases	Green	Communication and advocacy
		Interpersonal relationships
	Red	Cultural inclusion, diversity, and equity
		Policy
		One Health and Systems Thinking
	Green	Collaboration
		Leadership
	Red	Partnerships
	Yellow	Preparedness Planning
		Communication and coordination in an outbreak

Further options

Users of the WFD OT can also:

- "look inside" each competency package for more details of the competencies;

- amend and add competency packages according to the country context;

- further assess the workforce by administrative level, such as from field epidemiology training programmes, front-line, intermediate or advanced levels that correspond to local, sub-national and national workforce, referring to the *Competencies for One Health Field Epidemiology Framework (28)*, as relevant; and

- further assess the workforce by proficiency level, such as beginner, developing, intermediate or expert on scales such as those offered by the *Global competency framework for universal health coverage (45)*, *One Health Workforce Academies (46)* or the *Laboratory Leadership Competency Framework (43)*.

Materials for step 7 (see Annexes and Compendium of materials):
- framework of competency packages and competencies (M29) (critical) and
- exercise template for assessment of competency packages by function (M30) (critical)

Module 3

In Module 3, the results from Module 2 are used to identify appropriate recommendations and next steps for addressing gaps and integrating recommendations into workforce planning.

Sustainable workforce development planning
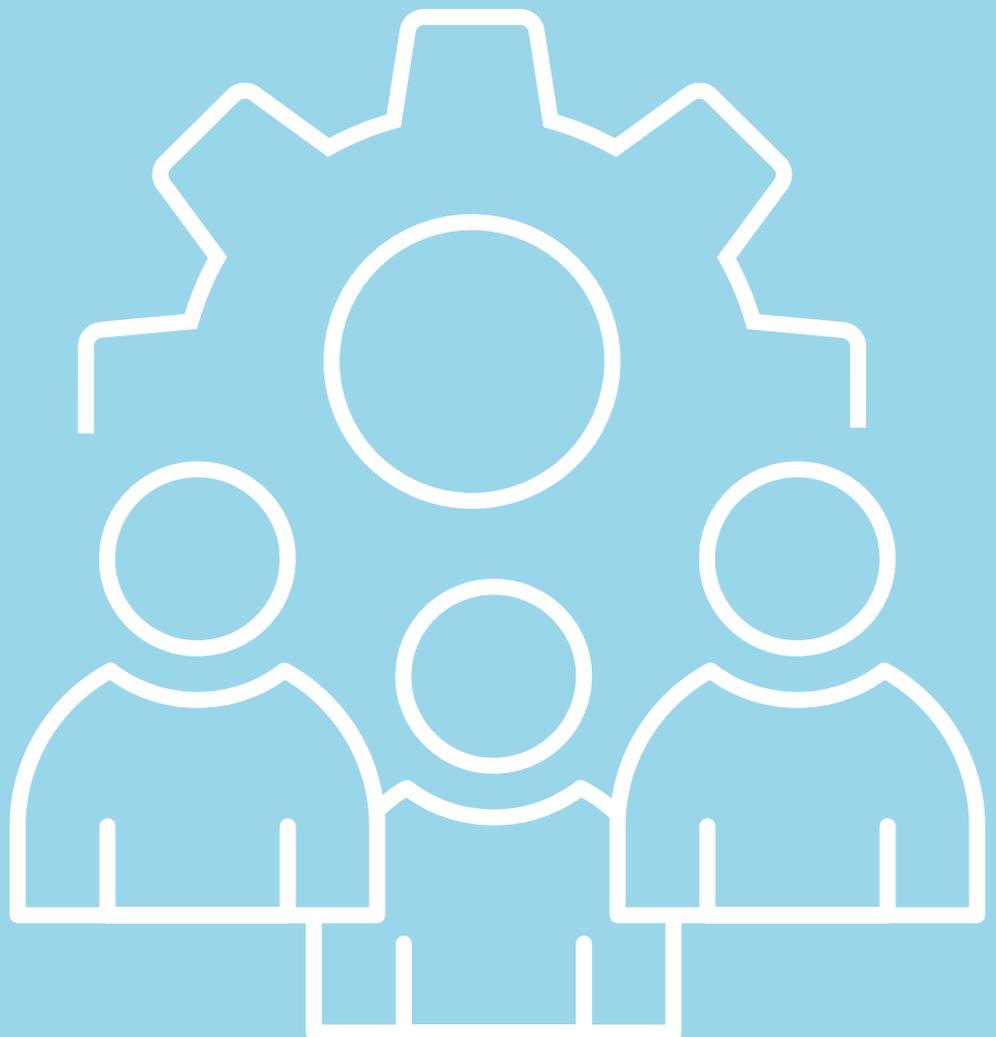
Step 8: Identify resources for strengthening competency packages

Fig. 16. Step 8 (module 3), Identify resources for development of competencies, is highlighted in the pathway of the WFD OT

Source: adapted from WHO (2)
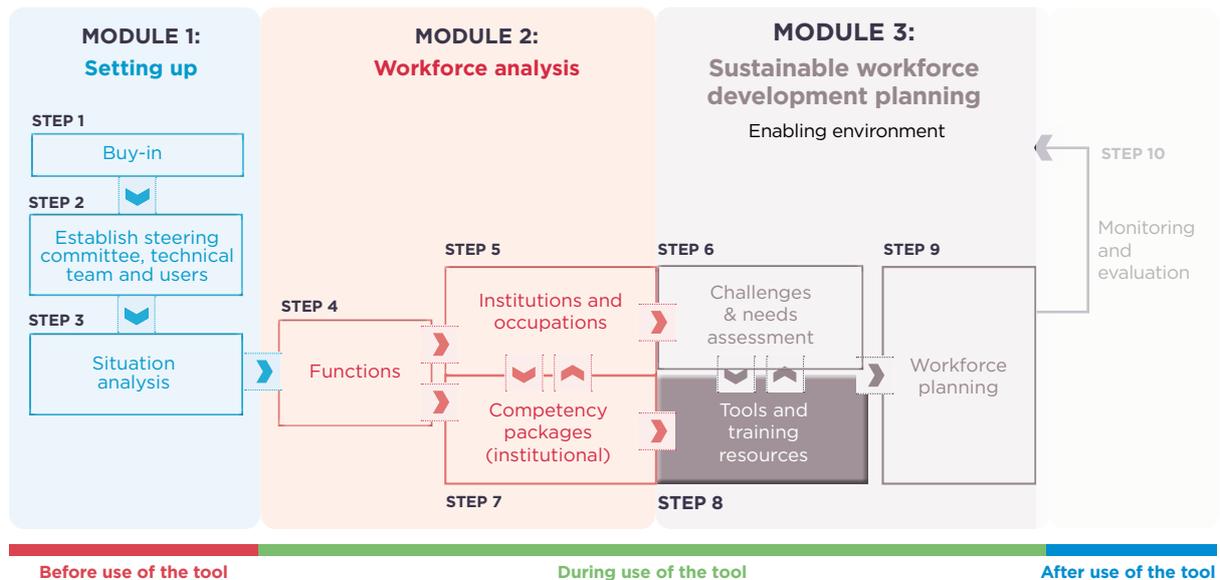
In Step 8, users explore available education programmes, trainings, and tools to strengthen the competency packages that were found to require strengthening in step 7. In this step, a *database of global and regional trainings and tools (M34a)* is provided, and users identify further

M34a Database of global and regional trainings and tools

regional and national programmes, trainings and tools that are available in local languages. An Airtable version of the database (M34b) is available with an associated instructional guide (M35).

The *database of global and regional trainings and tools (M34)* consists mainly (about 65%) of trainings and tools developed by FAO, UNEP, WHO and/or WOAH and also features select trainings and tools developed by other institutions to strengthen competency packages. FAO, UNEP, WHO and WOAH do not explicitly endorse any training material other than their own. The inclusion criteria for trainings are listed in Box 5.

Box 5. Inclusion criteria for training courses in the *database of global and regional trainings and tools* (M34)

- relevant to human health, animal health, the environment and/ or wildlife;

- relevant to zoonotic disease management;

- designed for national and subnational government authorities;

- non-degree courses or training that can be conducted in-service, incorporated into work schedules;

- training certificates based on performance and not solely on attendance or course completion;

- in-person, online, a combination or hybrid;

- either free or with an associated cost;

- either open access or restricted according to application or programme criteria;

- sustainable for long-term engagement, no one-off trainings; and

- available in English and in other languages (subtitles for videos are not considered a separate language from the language used in the videos).

In *the database of global and regional training and tools (M34)*, users can filter the resource by several indicators, including competency package, target audience, language, modality, cost and eligibility. The tools and resources in the database address functions, occupations and/ or competencies at institutional level; tools and resources that address areas of the enabling environment are discussed in step 9. The trainings can eventually be assigned to the relevant occupations and integrated into national workforce planning.

As mentioned above, users also undertake an exercise to identify relevant regional and national trainings and match them to the competency packages that most require strengthening. An *exercise 4 template for identifying trainings (M36)* is available. The objective of the exercise is to identify the most relevant training for strengthening the competency packages that require it most. The technical team may have already undertaken this task in step 3 in the situation analysis.

Exercise 4 template for identifying trainings (M36) is available

The competencies provided in available and applied national education programmes and trainings can be verified as meeting the needs of the workforce. They can be updated to ensure sustainability and cost-effectiveness before new programmes and trainings are introduced. Users can identify trainings for all competency packages and develop a complete database, which could be valuable in the future.

Materials for step 8 (see Annexes and Compendium of materials):
- database of global and regional trainings and tools (M34a), Excel
- database of global and regional trainings and tools (M34b), Airtable (critical),
- Airtable instructional guide (M35) and
- exercise template for identifying trainings (M36) (critical)

Step 9: Link critical needs, competencies and resources, and initiate the workplan

Fig. 17. Step 9 (module 3), Link critical needs, competencies and resources, and initiate the workplan, is highlighted in the pathway of the WFD OT. *Source: adapted from WHO (2)*
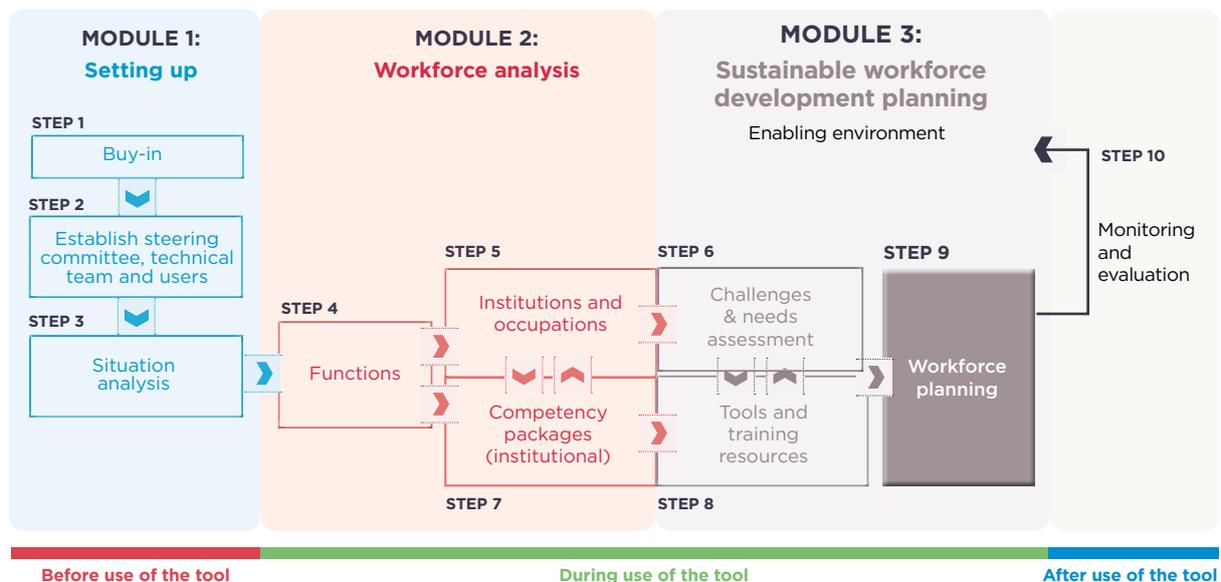
In Step 9, users discuss and agree on recommended actions for workforce planning based on the results of step 5 (priority functions), step 6 (needs and challenges), step 7 (competency packages) and step 8 (trainings and resources). The *template for workforce planning (M37)* is available to guide the discussion and to document recommended actions. Broad categories of recommended actions can include the assessment and strengthening of the following:

M37 Template for workforce planning

Within scope
- **Functions** e.g., revision of functions or terms-of-references
- **Occupations** e.g., revision of occupation titles
- **Competencies** e.g., competency-based training of existing personnel
- **National workforce plans** e.g., refinement and integration of recommendations

Enabling environment
- Health policy and system support for community health workers
- Educational and training quality
- Enforcement/ implementation of policy, legislation, or strategies
- Funding i.e., resource mobilization and allocation
- Governance/ institutional structure/ cross-sectoral structure
- Mitigation of health workers migration
- Infrastructure
- Labour market
- Occupational safety and health
- Policy/ Legislation/ Strategies
- Political will
- Regulation of the professions
- Standard Operating Procedures (SOPs)

- Workforce retention
- Working conditions / protections
- Others

It is recommended that users meet virtually or in person to finalize the results and contextualize inputs and recommended actions. At this stage, users will also consider how their work could be integrated into other national operations, plans and strategies (e.g., _National Bridging Workshop Roadmaps (32)_, One Health strategies, National Action Plans for Health Security, upcoming _Joint External Evaluations (14)_). They should also consider any additional resources that may be available to support their work. Further considerations are provided in Box 6.

Box 6. Considerations for completing the Step 9 template

- Link gaps, actions and activities in the action plan with other One Health work in the country. Identify past and current workforce analyses.

- Identify and resolve inconsistencies and conflicting approaches when aligning and integrating activities in the action plan with those in other plans to ensure that the plan will be financed, coordinated and implemented.

- Consider using the "responsible, accountable, consulted, informed" method _(47)_ to decide who does what and how for each activity

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This step is critical, as the recommended actions will serve as a road map for users to continue strengthening and planning. An _enabling environment guidance document (M38)_ and the _database of tools and resources for areas of the enabling environment (M39)_ are available to support countries in identifying resources to strengthen areas of the enabling environment.

Materials to be used:

- _M38 Enabling environment guidance document_
- _M39 Database of tools and resources for areas of the enabling environment_

"Tools" are defined as requiring active participation, usually in discrete steps and duration to completion, while "resources" are defined as passively informing activities, plans and strategies, with no start or finish.

The inclusion criteria for selecting tools and resources for the _database (M39)_ are:

- available in any language (official languages of the United Nations preferred);
- developed by FAO, UNEP, WHO, WOAH and/or partners;
- relevant to zoonotic disease management; and
- designed for government personnel at all levels and in all sectors.

Users can use the _database (M39)_ to identify tools and resources that are most relevant to each area of the enabling environment and note additional resources for further analysis. With the support of FAO, WHO and WOAH, a tailored, stepwise approach to addressing these areas can be developed.


Materials for step 9 (see Annexes and Compendium of materials):
- template for workforce planning (M37) (critical),
- enabling environment guidance document (M38) (critical) and
- database of tools and resources for areas of the enabling environment (M39)

Step 10: Develop or adapt an M&E framework, and include it in the plan(s)

Fig. 18. Step 10 (module 3), Develop or adapt an M&E framework and include it in plan(s), is highlighted in the pathway of the WFD OT.   *Source: adapted from WHO (2)*
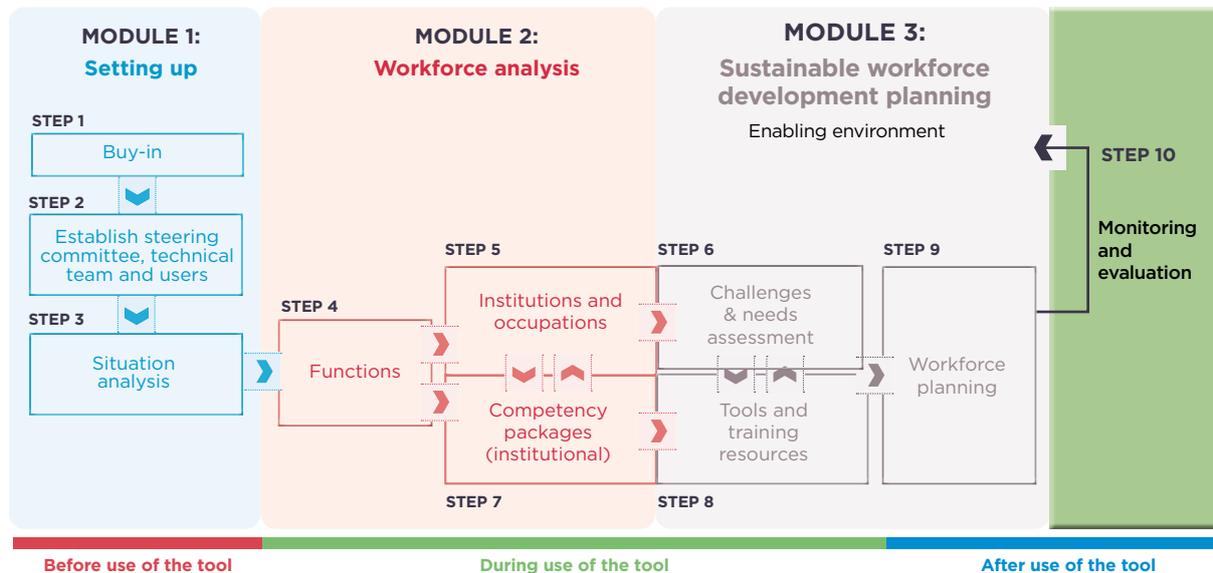
In this step, users monitor implementation of the recommended actions for workforce strengthening and planning.

M&E are used to measure and improve performance and assess the results of a current or completed activity, programme or policy by indicating the extent of progress in achieving objectives and in the use of allocated funds in order to improve performance, ensure accountability or demonstrate value *(1)*.

The definitions of the Tripartite Zoonoses Guide are as follows:

Monitoring is a continuous and systematic process of collecting, analyzing, and using information to guide activities toward their intended objectives. It provides timely information about whether an activity or programme or policy is being implemented as planned and allows 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 *Tripartite Zoonoses Guide (1)*, monitoring is performed routinely in activities related to One Health to meet specific objectives, and evaluation consists of determining the impact of multisectoral and One Health-related programmes and interventions. The M&E process provides information to policy-makers and others for use in programme planning and management. Reliable M&E (i.e. the ability to analyse and use data) at national and subnational levels are key for effective decision-making and sound planning and programming of zoonotic disease management.

While the *template for workforce planning (M37)* has a monitoring component that requires users to identify follow-up mechanisms and activities, a more detailed M&E framework can be developed to ensure continuous, structured M&E to monitor progress and measure the long-term impact of activities.

The extract from the M&E framework for the WFD OT (Fig. 19) is linked to the *Monitoring and evaluation for effective management of zoonotic diseases: Operational Tool of the Tripartite Zoonoses Guide(M&E OT)*[5], which supports countries in establishing and strengthening multisectoral One Health M&E for zoonotic disease-related activities and programmes. The tool addresses all the technical areas outlined in the *Tripartite Zoonoses Guide (1)*, including workforce development. It provides the M&E framework, a library of indicators with reference sheets, and data collection templates that users can adapt to monitor and report progress and achievements in the output, outcome and impact of workforce development activities tailored to national programmes, plans and strategies.

Fig. 19. Extract from the M&E framework for workforce development, with measurable output, outcome and impact

Source: M&E OT 5

Impact: Reduced zoonotic diseases risk and burden(s) on humans, animals and the environment			
Outcome 2: The workforce is trained, maintained and mobilized to work collaboratively across relevant sectors for effective control of zoonotic diseases			
Outputs:			
2.1 Multisectoral stakeholders (MCM or similar group) use a OH approach to plan for workforce management and development	2.2 The workforce is defined and includes all relevant sectors and disciplines thatcontribute to zoonotic disease preparedness and response	2.3 Workforce gaps and needs (including human resource needs and edu/ training strategies) are identified and addressed with sufficient resources	2.4 Workforce strategy/ plan is implemented and regularly reviewed to address identified gaps and needs
Example of activities:			
- Convene and engage key stakeholders for workforce development activities - Agree on objectives, goals, and define roles and responsibilities of stakeholders	- Identify coordinated functions (action and activities) and occupations(roles and capacities) that are necessary for a One Health approach to zoonotic disease	- Gather and review information of the current sector-specific and multi sectoral workforce situation (national and international assessments, frameworks, policies or regulations) - Use existing tools and processes to identify and analyze workforce gaps and needs across all sectors for current and future professionals - Identify and allocate resources to address workforce gaps and needs	- Develop, implement and review workforce strategy that addresses human resource needs and edu/ training strategies for workforce development and management - Align OH workforce strategy with existing national strategies and plans for zoonotic disease

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5 - WHO, FAO, WOAH. Monitoring and evaluation for effective management of zoonotic diseases: Operational Tool of the Tripartite Zoonoses Guide. FAO; 2024 (in press).

For each result, indicators are designed to measure progress toward their achievement. The framework can be customized to meet national requirements and priorities for workforce development. M&E designed with the M&E OT or another framework or instrument provides the essential elements, such as a framework, indicators, data collection forms and a plan. This systematic approach ensures effective collection and analysis of relevant information on workforce development to measure progress in achieving short-term results and long-term impacts. It also ensures tracking and understanding of how well recommendations and activities in workforce development have been integrated into the national operations, plans and strategies identified in Step 9. This in turn facilitates financing, coordination and implementation of initiatives to ensure a competent, maintained, effectively mobilized workforce in relevant sectors and disciplines.

Material for step 10: M&E OT [5].

After completion of the WFD OT

Evaluation

It is recommended that users of the WFD OT complete an online evaluation once they have completed it to help improve the tool content, structure and format. In the workshop format, it is suggested that an evaluation be completed after each day or at the end of the workshop.

M40 an evaluation form for print or online use is available.

Certificates of participation

A *template certificate of participation (M41)* in the WFD OT is available for technical teams that wish to issue certificates for users.

M41 template certificate of participation.

Validation of the final report

The technical team will prepare a report, using the *template report (M42)* as needed. The report is usually prepared within 2 weeks of use of the WFD OT. One or two users could be selected to finalize the report and to organize validation, which may require virtual or in-person meetings with the technical team.

Material to be used:

M42 Template report

The steering committee and the technical team will have an opportunity to ask questions, provide input, validate the report and ensure support for the next steps outlined, including integration into national workforce strategies or planning approaches.

Supporting materials for post-workshop:
- workshop evaluation form for print (M40a)
- instructions for digital evaluation forms (M40b) (critical),
- template certificate of participation (M41) and
- template report (M42) (critical)

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Annexes

Annex 1. Complete list of materials for in-person workshops

A complete list of critical and supporting materials for in-person workshops is provided here. Materials are compiled in a compendium, and individual files are available online for download. *Indicates materials that are critical for the WFD. Details on how and when the materials should be used are summarized in the *WFD steps and materials list (M08).*

Module 1: Setting up

Step 1: Generate buy-in, and secure agreement to use the WFD OT

(M01) WFD OT factsheet, pdf*

(M02) "Introduction to WFD OT", PowerPoint presentation*

(M03) Template workshop concept note and agenda, Word document*

(M04) Template webinar concept note and agenda, Word document

(M05) "Introduction to One Health", PowerPoint presentation

(M06) "Role of environment and wildlife professionals in One Health" text, pdf

Step 2: Identify a steering committee and technical team

(M07) Technical team terms of reference, pdf

(M08) WFD steps and materials list, pdf*

(M09a) Facilitators' manual for in-person workshops, pdf*

(M10) Guidance for user representation, pdf

(M11) Glossary of terms, pdf

(M12) Preparatory checklist for users of the tool, pdf

(M13) List of workshop supplies, pdf

(M14) Day 1 PowerPoint presentation*

(M15) Day 2 PowerPoint presentation*

(M16) Day 3 PowerPoint presentation*

Step 3: Conduct situation analysis and set the scope

(M17) Guidance for a situation analysis, PowerPoint presentation*

(M18) Guiding questions, Word document*

(M19) Template for countries' presentations, PowerPoint presentation

(M20) Tutorial on situation analysis and setting the scope, video

Module 2: Workforce analysis

Step 4: Select and revise priority functions of the workforce

(M21) Exercise 1 part 1 disease scenarios, pdf*

(M22) Workforce Function List_cards for exercise 1, Word

(M23) Exercise 1 part 1 posters, PowerPoint Presentation

(M24) WFD OT functions, Word document*

(M25) Exercise 1 part 2 template, Word document

(M26) WFD OT sub-functions, pdf

Step 5: Match and rate occupations to priority functions

(M27) WFD OT occupations, Word document*

(M28) Exercise 2 part 1 template, Word document

(M29) Example tasks by occupation, Word document

(M30) Matrix for mapping occupations and functions by sector, Excel file

Step 6: Identify needs and challenges

(M31) List of needs and challenges, Word document*

Step 7: Rate competency packages required for priority functions

(M32) Framework of competency packages and competencies, pdf*

(M33a) For Print_Exercise 3 template_assessment of competency packages by function, Word document*

(M33b) Digital version_ Exercise 3 template_ for assessment of competency packages by function, Excel file*

Module 3: Sustainable workforce development planning

Step 8: Identify resources for strengthening competency packages

(M34a) Database of global and regional trainings and tools, Excel file*

(M34b) Database of global and regional trainings and tools, Airtable*

(M35) Airtable instructional guide, Word document

(M36) Exercise 4 template for identifying trainings, Excel file*

Step 9: Link critical needs, competencies, and resources and initiate the workplan

(M37) Template for workforce planning, Word document*

(M38) Enabling environment guidance document, pdf*

(M39a) Database of tools and resources for areas of the enabling environment, Excel file*

(M39b) Database of tools and resources for areas of the enabling environment, Airtable*

Step 10: Develop or adapt an M&E framework, and include in plan(s)

See M&E OT for supporting materials

Post-WFD OT use

(M40a Workshop evaluation form, for print

(M40b) Instructions for digital evaluation forms*

(M41) Template certificate of participation, Word document

(M42) Template report, Word document*

Annex 2. Complete list of materials for virtual tool use

A complete list of critical and supporting materials for virtual exercises is provided here. Materials are compiled in a compendium, and individual files are available online for download. *Indicates materials that are critical for the WFD. Details on how and when the materials should be used are summarized in the *WFD steps and materials list (M08).*

Module 1: Setting up

Step 1: Generate buy-in, and secure agreement to use the WFD OT

(M01) WFD OT factsheet, pdf*

(M02) "Introduction to WFD OT", PowerPoint presentation*

(M03) Template workshop concept note and agenda, Word document*

(M04) Template webinar concept note and agenda, Word document

(M05) "Introduction to One Health", PowerPoint presentation

(M06) "Role of environment and wildlife professionals in One Health" text, pdf

Step 2: Identify a steering committee and technical team

(M07) Technical team terms of reference, pdf

(M08) WFD steps and materials list, pdf*

(M09a) Facilitators' manual for in-person workshops, pdf*

(M10) Guidance for user representation, pdf

(M11) Glossary of terms, pdf

(M12) Preparatory checklist for users of the tool, pdf

(M13) List of workshop supplies, pdf

(M14) Day 1 PowerPoint presentation*

(M15) Day 2 PowerPoint presentation*

(M16) Day 3 PowerPoint presentation*

Step 3: Conduct situation analysis and set the scope

(M17) Guidance for a situation analysis, PowerPoint presentation*

(M18) Guiding questions, Word document*

(M19) Template for countries' presentations, PowerPoint presentation

(M20) Tutorial on situation analysis and setting the scope, video

Module 2: Workforce analysis

Step 4: Select and revise priority functions of the workforce

(M21) Exercise 1 part 1 disease scenarios, pdf*

(M24) WFD OT functions, Word document*

(M25) Exercise 1 part 2 template, Word document

(M26) WFD OT sub-functions, pdf

Step 5: Match and rate occupations to priority functions

(M27) WFD OT occupations, Word document*

(M28) Exercise 2 part 1 template, Word document

(M29) Example tasks by occupation, Word document

Step 6: Identify needs and challenges

(M31) List of needs and challenges, Word document*

Step 7: Rate competency packages required for priority functions

(M32) Framework of competency packages and competencies, pdf*

(M33b) Digital version_ Exercise 3 template_ for assessment of competency packages by function, Excel file*

Module 3: Sustainable workforce development planning

Step 8: Identify resources for strengthening competency packages

(M34a) Database of global and regional trainings and tools, Excel file*

(M34b) Database of global and regional trainings and tools, Airtable*

(M35) Airtable instructional guide, Word document

(M36) Exercise template for identifying trainings, Excel file*

Step 9: Link critical needs, competencies, and resources and initiate the workplan

(M37) Template for workforce planning, Word document*

(M38) Enabling environment guidance document, pdf*

(M39a) Database of tools and resources for areas of the enabling environment, Excel file*

(M39b) Database of tools and resources for areas of the enabling environment, Airtable*

Step 10: Develop or adapt an M&E framework, and include in plan(s)

See M&E OT for supporting materials

Post-WFD OT use

(M40b) Instructions for digital evaluation forms*

(M41) Template certificate of participation, Word document

(M42) Template report, Word document*