Food and Agriculture Organization of the United Nations

Evaluation of FAO's Programme Priority Area on One Health (better production 3)

Evolution of FAO's One Health approach 2010–2023

Thematic Evaluation Series
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FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
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Abstract

The evaluation reviews the evolution and operationalization of the work of the Food and Agriculture Organization of the United Nations (FAO) in One Health between 2010 and 2023.

One Health is an integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals and ecosystems. One Health transcends the purview of any one discipline or sector.

The evaluation found that FAO has played an active role in the evolution of One Health over the last 20 years, culminating in the creation of a specific priority area in its Strategic Framework. Historically, FAO's work in One Health has been significantly shaped by projects of the animal health sector although this has evolved. A highlight of FAO's promotion of a One Health approach has been the work on antimicrobial resistance (AMR) and antimicrobial use, which has involved collaboration between multiple sectors.

Externally, FAO has worked closely with partners (such as the members of the Quadripartite, namely the World Health Organization [WHO], the World Organisation for Animal Health [WOAH] and the United Nations Environment Programme [UNEP]), and participated in key initiatives to develop an approach accepted worldwide. FAO's role and leadership in One Health is recognized by partners particularly, it's technical work on animal health, is perceived as significant. Quadripartite partners stressed FAO's technical capacities and presence at country level as standout comparative advantages and noted that there is room for even greater collaboration among members.

The approach used to monitor One Health-related results during the period under review relied mainly on aggregated output indicators. The approach rarely included measures of outcomes (actual changes to which the projects may have contributed) and lacked a qualitative analytic dimension, which limited an assessment of the significance of the changes and progress in implementing the One Health approach.

Last, FAO lacks guidance to address social inclusion (including gender and youth) in a systematic manner within a One Health approach.

Based on these findings, the evaluation makes three recommendations for FAO to:

i Leverage the multidisciplinary and multisectoral dimensions of the Organization in its positioning on One Health.

ii Update the One Health results measurement system.

iii Develop and disseminate guidance to help One Health practitioners and project teams integrate social inclusion (including gender and youth) in using a One Health approach.

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The core evaluation team of the FAO Office of Evaluation consisted of Mr Roger Miranda (Senior Evaluation Specialist), who led the evaluation, Ms Eeman Amjad (co-manager of the evaluation), Ms Nakita Aboya (Evaluation Analyst) and Ms Liza Ottlakán (Evaluation Analyst). The team also included five international experts: Dr Michael Bresalier, University of Swansea, the United Kingdom of Great Britain and Northern Ireland (evolution of One Health); Dr Cécile Aenishaenslin, University of Montréal, Canada (measuring results); Dr Nicolas Antoine-Moussiaux, University of Liège, Belgium (resource distribution and partner perceptions); Dr Sara Savic, Scientific Veterinary Institute "Novi Sad", Serbia (gender and social inclusion); and Dr Delia Grace Randolph, Natural Resources Institute, the United Kingdom of Great Britain and Northern Ireland (Technical Adviser).

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Abbreviations

AMR	antimicrobial resistance
BP	better production
FAO	Food and Agriculture Organization of the United Nations
HPAI	highly pathogenic avian influenza
M&E	monitoring and evaluation
OHHLEP	One Health High-Level Expert Panel
OWOH	One World, One Health
PPA	Programme Priority Area
PWB	Programme of Work and Budget
TAD	transboundary animal disease
UNEP	United Nations Environment Programme
USAID	United States Agency for International Development
WHO	World Health Organization
WOAH	World Organisation for Animal Health

Executive summary

1 This is the first evaluation by the Food and Agriculture Organization of the United Nations' (FAO) Office of Evaluation which comprehensively assesses FAO's longstanding work in One Health. Given that the One Health (better production 3 [BP3]) Programme Priority Area (PPA) has existed for only two years, the evaluation focuses on describing the evolution and operationalization of One Health from its early genesis to its current role in the FAO Strategic Framework.

2 The results of this analysis offer insights on the evolution of FAO's understanding and application of One Health, highlighting the challenges and successes of mainstreaming this approach and integrating it into programmes and plans. As such, it can inform the development of a shared understanding of One Health, help FAO refine its results framework, and strengthen its work with agency partners collaborating on One Health (known as the Quadripartite).[1]

3 While not the primary users of the evaluation, external stakeholders such as national governments, the Quadripartite partners, and FAO's resource partners can benefit from understanding the evolution of FAO's work in One Health. The findings and conclusions can also serve as inputs for future formative and impact evaluations on One Health.

4 One Health is 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. 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" (FAO, WOAH, WHO and UNEP. 2021).

5 FAO's work in One Health spans more than a decade and has changed significantly over time. This evaluation focuses on this period (2010 until 2023), beginning with FAO formalizing its efforts in One Health with the Tripartite[2] concept note (see Box 1) and includes the establishment of the PPA-BP3 (One Health).

6 The evaluation answers three key questions:

i. *Definitions and operationalization*: How did FAO's work in One Health evolve and how has it been implemented? What was the distribution of One Health resources?

ii. *Measuring progress and results*: How were results in One Health interventions measured?

iii. *Tri/Quadripartite partners' perceptions of FAO's work*: How was FAO's work in One Health perceived by partners and donors?

7 The evaluation relied on:

i. Stakeholder mapping and analysis to identify different sets of stakeholders (per key areas), specifying the rationale for inclusion and the participation method.

1 The Quadripartite is formed by the World Health Organization (WHO), World Organisation for Animal Health (WOAH) and, as of 2022, United Nations Environment Programme (UNEP).

2 The Tripartite was the name given to the (now) Quadripartite before UNEP joined the original group of three agencies.

3 FAO's Strategic Framework 2022–2031 includes One Health in one of the Programme Priority Areas under better production (known as BP3). However, before the implementation of the new Strategic Framework in 2022, there was no explicit PPA tagging process to identify One Health projects. To address this gap, the evaluation team relied-on word searches.

ii. Portfolio analysis, which included all projects (113 in total) that had One Health in the title or objectives, with a total funding of USD 331 million.[3]

iii. Document and literature reviews to comparatively analyse the evolution of operational definitions of One Health within and outside FAO.

iv. Analysis of FAO project documents and data to produce descriptive statistics of the methods and indicators used over time to measure the results of One Health interventions.

v. Analysis of human and financial resources of One Health projects, based on Programme of Work and Budget (PWB) data by division.

vi. Semi-structured interviews with 66 stakeholders to gather insights and perceptions on FAO's work in One Health.

8 The PPA-BP3 was created under the FAO Strategic Framework 2022–2031 and has its roots in the Organization's decades-long work on issues related to One Health. FAO's work on One Health is framed by the current Strategic Framework and contributes to the One Health Joint Plan of Action (2022–2026) of the Quadripartite, which in turn is advised by the One Health High-Level Expert Panel (OHHLEP).

Box 1 **One Health and the Quadripartite – A Partnership**

In 2010, the joint publication of the Tripartite concept note on One Health formalized the three organizations' commitment to interagency collaboration in developing and promoting One Health approaches. In 2022, this alliance was extended to include the United Nations Environment Programme (UNEP) to adequately address environmental concerns, thereby forming the Quadripartite.

The vulnerability of the governing international health system exposed by the COVID-19 pandemic propelled the (then) Tripartite to strengthen their science-based collaboration across sectors. The Tripartite established a multidisciplinary One Health High-Level Expert Panel to offer technical and scientific guidance on One Health matters. In December 2021, the Expert Panel defined One Health as *"an integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals and ecosystems"*.

Although some stakeholders consider FAO a "One Health" organization because of its contributions to these areas since 1945, the One Health approach specifically involves collaboration across multiple sectors, disciplines and communities, as defined by the expert panel. This approach distinguishes One Health from efforts that focus in the health of humans, animals or environment as distinct (rather than integrated) areas of focus.

Findings

Evolution of One Health

9 *FAO has played a consistent and active role in the evolution of One Health over the last 20 years*. It has responded to and participated in broader international initiatives to develop a One Health approach to emerging infectious diseases, pandemic preparedness, food security and antimicrobial resistance (AMR). Likewise, FAO has taken the lead in establishing international strategic frameworks, mechanisms and instruments that have been crucial to operationalizing One Health as a multisectoral and multilateral approach. These include the Manhattan Principles (2004), which outline 12 recommendations for a more holistic approach to preventing epidemics, the development of national One Health plans, "Contributing to One World One Health: A Strategic Framework for Reducing Risks of Infectious Diseases at the Animal-Human-Ecosystem Interface" (FAO, 2008b), and the Tripartite concept note (2010) among others.

10 *As a concept, One Health has evolved over time at FAO.* The term has been in use since 2004, and efforts to put the general concept in practice within FAO have taken place since at least 2008. However, for most of the period under review (2010–2023), One Health was not formally defined nor embedded in FAO's Strategic Framework. Significant differences also exist in how One Health is understood and approached within FAO. These can be categorized into "disease-focused" and "healthfocused" approaches.

11 *The animal health sector has played a leading role in the evolution and implementation of One Health within FAO.* One Health has been significantly shaped by the plans, agendas, imperatives, projects and resources (human and financial) of the animal health sector such as the Emergency Centre for Transboundary Animal Diseases (ECTAD). The prioritization of zoonotic diseases, and especially highly pathogenic avian influenza (HPAI) in early approaches to One Health, enabled FAO to establish a leading role in pandemic preparedness and prevention – areas in which it had previously not been active. FAO thus developed and implemented One Health approaches that played to its organizational strengths and capacities, especially in animal health.

12 Work on antimicrobial resistance and antimicrobial use since 2015 involved collaboration between multiple sectors and divisions, resulting in the broadening of the concept and practice of One Health in FAO. Unlike previous One Health work on single diseases (highly pathogenic avian influenza, rabies, salmonellosis) or groups of diseases (endemic zoonoses or transboundary animal disease [TADs]), One Health work on antimicrobial resistance has been underpinned by a more inclusive systems approach to health. For example, FAO's first Action Plan on AMR (2016–2020) emphasized a One Health approach to address antimicrobial resistance by integrating efforts across human, animal, environmental and agrifood systems. Some stakeholders recognize the 2016–2020 Action Plan on AMR as the "flagship" of FAO's approach to One Health.

13 *One Health was a key part of FAO's COVID-19 Response and Recovery Programme*, which integrated lessons from other zoonotic crises, such as the 2014 Ebola outbreak, that underscored the importance of anticipating and addressing the continuity of the food supply chain. One Health became the focus of the sixth Programme Priority Area – preventing the next zoonotic pandemic.

14 BP3 represents the first time One Health has been made a standalone programme area in a strategic framework, presenting an opportunity to foster a paradigm shift by implementing One Health in support of FAO's broader strategic aims of sustainable agrifood systems for all beyond disease-based approaches. The previous Strategic Framework (2010–2019) did not specifically reference or operationalize One Health. BP3 marks an important step in the evolution and mainstreaming of One Health within FAO, but it is not without its challenges, especially at national and subnational levels. The most significant challenges at those levels include the professional segregation and disparity between the animal health/production and the public health sectors regarding financial resources and the labour force, the insufficient involvement of natural resource sectors, and the lack of intersectoral policies and legal frameworks for evidence-based decisions. International, regional and intercountry cooperation is also required as "diseases know no borders".

One Health projects' financial and human resources 2010–2023

15 *There were a total of 113 One Health projects* identified during the period under review, mostly located at the country level (69 percent). These accounted for only 42 percent of the One Health projects' budget, while 51 percent of the project the funds were for globally-managed projects. One Health projects are located primarily at country level, with the remainder distributed at the subregional (4 percent), regional (11 percent), and global (17 percent) levels. In the last two years, important funding opportunities at the country level have emerged, and this may benefit FAO activities thanks to its presence in countries and experience at the national level. Funding for relevant global, regional and intercountry work is, however, becoming more difficult to obtain partly due to changes in donor policies.

16 *Within headquarters, two divisions are the main budget holders of One Health projects*, the Office of Emergencies and Resilience is the main budget holder (37 percent of projects), followed by the Animal Production and Health Division (8 percent of projects). Other divisions combined are budget holders for less than 3 percent[4] of projects. This reflects the historical evolution of FAO's work in One Health, which is spearheaded by animal health efforts such as ECTAD.

17 *FAO One Health projects are concentrated in a few areas.* These are health systems, strengthening, endemic and emerging zoonoses, transboundary animal diseases, and antimicrobial resistance, when mapped along the six action tracks of the One Health Joint Plan of Action 2022–2026.[5] The Animal Production and Health Division had the technical lead for 60 percent of One Health projects.

18 Reliance on project funding as a means of hiring personnel has some negative consequences in building institutional capacities and reducing efficiencies. Most personnel working on One Health are hired under consultancy contracts with short contract periods. This increases the administrative burden, negatively affects institutional memory and ultimately affects the Organization's ability to provide long-term support.

Measuring One Health project results

19 One Health was not explicitly articulated in the outcomes of the 2010–2019 FAO Strategic Framework, even though One Health-related activities in projects were being conducted. The approach used to monitor One Health-related results during 2010–2019 relied mainly on aggregated output and outcome indicators. Output indicators were mostly formulated either as assessments of project activities completed (e.g., "Coordinated mechanisms for the evaluation of One Health operationalization are in place") or as quantifiable observations (e.g., "Number of meetings jointly participated by the ministries on the One Health coordination mechanism"). When available, outcome indicators were formulated in a similar way (e.g. "Number of countries whose AMR multisectoral coordination mechanisms engage with a broad range of relevant partners"). A description of results was often provided in terminal reports, which mainly summarized the outputs and outcomes, with little to no analysis of how FAO contributed to significant changes. Also, some projects had indicators that monitored specific dimensions, such as collaboration and coordination, though these were not standardized.

20 The results measurement system for One Health did not change significantly during the period of the previous strategy, but major changes were introduced with the inclusion of BP3 (One Health) in the Strategic Framework. The Strategic Results Framework for BP3 details the following: gaps, expected outcomes, SDG targets and indicators, accelerators, key thematic components, normative aspects, core function strategy, output indicators, trade-offs and risk mitigation. However, the BP3 results framework is intended to be mainly used to organize and monitor One Health progress of FAO at the macro level; it does not provide specific guidance for monitoring and evaluation (M&E) at the project level.

21 So far, there is no indicator specific to the strengthening of One Health systems in the BP3 Results Framework, although this element is clearly identified as an expected outcome of BP3. The evaluation also found no harmonized measurement system for results at the project level, although there are tools in use that can be considered a step in the right direction. Nonetheless, projects that focused on One Health operationalization at the national level or on AMR mitigation seem to integrate more intersectoral result indicators compared to projects that focus on specific diseases or sectors, such as the strengthening of veterinary services.

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4 The evaluation team selected 11 divisions in headquarters, but this list does not include all divisions (nor all FAO organizational units globally) responsible for One Health projects, hence the budget distribution does not sum up to 100 percent.

5 This is the joint framework for action of the Quadripartite and proposes a set of activities and theory of change to advance and sustainably scale up One Health.

22 There are numerous examples of FAO's contributions during the period under review. Highlights include supporting countries to structure and support the implementation of intersectoral collaboration and coordination for zoonotic diseases, AMR and food safety. Nonetheless, the lack of consensus on the definition of and expected results from One Health at FAO, combined with the lack of harmonization of the result measurement system in the period 2010–2019, limits the capacity to systematically assess results reported under the previous strategy. This limitation will be addressed in the future thanks to the inclusion of One Health in the new Strategic Framework.

Partner perceptions of FAO's One Health work

23 FAO's areas of work within the Tri/Quadripartite have been diverse, spanning all six action tracks of the One Health Joint Plan of Action. The diversity of contributions appears as a strength for the position of FAO within the Quadripartite. FAO is recognized by Quadripartite partners consulted as an important contributor to knowledge production and sharing for implementing One Health.

24 FAO's role and leadership on One Health is recognized within the Quadripartite. The role played by FAO at different levels (e.g., regional or country) as a convener, as well as the role it played in drafting the current One Health Joint Plan of Action (2022–2026), was consistently pointed as positive examples of that leadership. The upcoming process of drafting a new joint plan of action presents an opportunity for a stocktaking exercise of the work of the Quadripartite. Partners also stated that FAO's ability to mobilize resources was a recognition of its track record in One Health.

25 FAO's technical work on animal health is perceived by partners as significant. The central place Emergency Centre for Transboundary Animal Diseases (ECTAD) holds in partners' perceptions of FAO's contribution to One Health tends to overshadow other valuable ones such as work on AMR, food safety and sustainable wildlife management.

26 FAO depicts its comparative advantages as lying mainly in its multidisciplinary, multisectoral capabilities and operational and analytical capacities at the country level. Partners consulted mostly stress FAO's technical capacities and presence at the country level as the standout comparative advantages.

27 FAO is engaged in multiple relevant partnerships besides the Quadripartite such as the Collaborative Partnership on Sustainable Wildlife Management, which provides a platform for addressing wildlife management issues that are relevant for emerging zoonotic threats. Even when they involve Quadripartite partners, those collaborations are not directly connected to Quadripartite work. The overall positioning of FAO in the One Health landscape that results from this set of partnerships demonstrates a broader engagement beyond the Quadripartite.

28 FAO has proven able to maintain long-term funding partnerships, albeit with a limited number of donors. This is largely due to the Organization's track record in One Health as a source of technical expertise and operational capacity. Nonetheless, dependence on a few donors is a risk, particularly for those country programmes whose majority share of One Health funds depends on one donor. Country-level funding opportunities such as the Pandemic Fund are emerging. FAO actively participates in calls for proposals and is starting to become a major partner of the Pandemic Fund.

Cross-cutting issues

29 FAO developed numerous strategic documents and guidelines concerning social inclusion (such as the Framework for Gender Responsive Livestock Development) during the period under review. These efforts culminated in the integration of gender, youth and social inclusion as crosscutting themes in the Strategic Framework 2022–2031. However, FAO lacks benchmarks and tools to systematically address gender, youth and inclusion within a One Health approach. One of the primary challenges in integrating social inclusion considerations into One Health programmes and initiatives stems from the vast scope and complexity of One Health. Benchmarking for gender and social inclusion

in One Health is crucial to identify and address compounded disparities across human, animal and environmental health domains, ensuring equitable access to resources and reducing vulnerabilities to health risks.

30 Social inclusion was not a prominent feature in One Health projects, even though One Health conceptually promotes equity, access and inclusivity. In the analysis of One Health projects, the evaluation found that only 22 percent of projects included gender in their outcome or output indicators and only one project included youth. The evaluation found no evidence of the inclusion of other groups, such as Indigenous Peoples, as project beneficiaries.

31 FAO projects reveal good practices for mainstreaming gender and youth into FAO's One Health work. These include the Virtual Learning Centre course on One Health and female leadership, the action to support the implementation of Codex AMR in Pakistan and the Bangladesh Veterinary Olympiad.

Conclusions

Evolution of One Health

32 Through leadership in its animal health sector, FAO developed a One Health approach that has leveraged and enhanced its organizational strengths and capacities. At the heart of this approach is the aim of addressing One Health problems at the source through the implementation of concerted, country-level biosecurity projects and plans, and through the strengthening of human–animal–environmental health systems. Although historically FAO's approach to One Health has been largely defined and shaped by the priorities, projects and funding of the animal health sector, One Health, as an approach, cuts across all disciplines and sectors.

33 One Health approaches in FAO have been overwhelmingly disease-focused. This has had important implications for the evolution, orientation and understanding of One Health within the Organization. Despite general agreement that One Health is best characterized as an integrated, unifying, multidisciplinary, multisectoral approach to optimize the resilience and health of people, animals and ecosystems, this is not how it has been defined or operationalized over the last ten plus years.

34 The development and adoption of the 2021 One Health High-Level Expert Panel definition of One Health represents an important step towards addressing variations in the definition and meaning of One Health that existed in the past and for establishing greater consensus within FAO. The definition marks a significant shift from disease-focused approaches to health- and health systems-focused approaches to One Health. However, it would be premature to assume that long-standing differences in the conceptualization and understanding of One Health and its operationalization will suddenly disappear. It is important and necessary to recognize that One Health, as currently defined, requires a general cognitive and organizational shift in perceptions of and approaches to One Health.

35 The change in the positioning of One Health in FAO in the 2021–2030 Strategic Framework reflects its operational and strategic value. This is due to the efforts of FAO in the preceding decade, particularly its leading role on One Health in agrifood systems, in the Tri/Quadripartite and in its own One Health work at all levels on, most notably, pandemic preparedness and prevention, zoonoses, transboundary animal diseases, AMR, and foodborne infections. However, locating One Health as a better production PPA potentially risks retaining a narrow focus on well-established areas (zoonoses, pandemic preparedness, transboundary animal disease, AMR) and thus might limit the scope or potential of One Health to harness and mobilize the full multidisciplinary capacities, knowledge and skills within FAO.

One Health projects' financial and human resources 2010–2023

36 The financial analysis of the One Health projects portfolio shows the important role the Office of Emergencies and Resilience and Animal Production and Health Division have had over time, and the corresponding technical role of the Animal Production and Health Division and its Emergency Prevention System and AMR programmes in scaling One Health work through, for example, ECTAD. One Health projects have mostly been implemented in an emergency and resilience context, with 60 percent of the One Health project portfolio tagged as emergency, in comparison, 30 percent of the overall FAO project portfolio is tagged as emergency. The analysis also highlighted that the flexible but short-term approach of human resources based on consultancies hired through One Health projects deprives the Organization of the stability of personnel needed to build institutional memory and sustain the internal collaborations across the multiple disciplines and sectors needed to fully realize its potential in One Health.

Measuring One Health project results

37 *Aggregated indicators are insufficient to capture progress in One Health in a comprehensive way.* Given that One Health is a systematic, multilevel, transdisciplinary and intersectoral approach, monitoring results requires using approaches that embrace this complexity. The inclusion of a diversity of methods and indicators is needed for a more nuanced and comprehensive picture to emerge, which would better capture not only changes in processes and governance, but also outputs, outcomes, and eventually impacts to measure the added value of One Health.

38 *FAO is investing considerable effort in explicitly integrating One Health into its operations through BP3.* The fact that One Health is confined to BP3 is both a strength and a weakness. The explicit inclusion of One Health as a PPA gives visibility to the approach and helps in clearly defining the expected results (and the associated Sustainable Development Goals [SDG] indicators), which is a strength. However, presenting One Health as a PPA rather than a cross-cutting approach that could be applied to other PPAs could limit its use in other projects that might benefit from it and prevent robust monitoring of One Health-related results from other PPAs.

Partners' perceptions of FAO One Health work

39 Partners perceive FAO as mainly positioned in the One Health landscape around animal health. This is due to ECTAD's operational success in technical aspects of zoonotic control.

40 Quadripartite partners recognize several comparative advantages that FAO has in One Health, yet they also identified some areas for improvement in the functioning of the partnership. Advantages include technical, analytical, and operational capacities and a convening role. The overlaps with its Quadripartite partners appear as thematic commonalities, allowing for synergies to emerge. Nonetheless, the lack of a mechanism for task distribution at the Quadripartite level may limit the leveraging of these complementarities. There is an opportunity to consider improvements in drafting the new Quadripartite One Health joint plan of action. A stocktaking exercise, such as a joint evaluation, can provide inputs for that process. The recognized value and leadership of FAO by its Quadripartite partners can allow FAO to further leverage its advantages in an evolving landscape of One Health funding and implementation, particularly at the country level where FAO holds a key advantage compared to the United Nations Environment Programme (UNEP) and the World Organisation for Animal Health (WOAH).

Cross-cutting issues

41 FAO One Health projects have addressed social inclusion (including gender and youth) to some extent, but they seldom monitor and report on them. During the period under review, 2010–2023, only 22 percent of projects had outcomes or outputs linked to these dimensions.

Recommendations

Recommendation 1. *For FAO senior managers:* Leverage the multidisciplinary and multisectoral dimensions of the Organization in its positioning on One Health, ensuring the appropriate engagement of underrepresented divisions in One Health efforts (as part of a system approach). The human resource needs should be assessed and addressed, using the One Health Workforce Competencies, to build and harmonize One Health skills to support development of long-term One Health collaborations inside FAO.

42 Senior management, the management team for the One Health PPA, and other internal stakeholders, will need to continue to cultivate a common and shared understanding of One Health within FAO based on the Expert Panel definition and FAO's track record in One Health as part of the process of rolling out FAO's vision for One Health under BP3 in the Strategic Framework.

43 It is important and necessary to recognize that One Health, as currently defined, requires a general cognitive and organizational shift in perceptions of and approaches to One Health. This will likely be a lengthy process that senior management across technical divisions, in coordination with the partnerships and outreach stream, can support and foster through a combination of communication activities, working groups, targeted funding, and country level capacity building. This can include workshops on lessons learned and good practices in implementing One Health (specially at subnational levels), as well as sustained strategic outreach and advocacy efforts targeting key UN system stakeholders, resource and implementing partners at global, regional and country levels.

Recommendation 2. *For BP3 leadership, OSP and related technical divisions:* Update the One Health results measurement system to better capture progress and results related to the implementation of One Health in FAO projects and activities. The leadership of other relevant PPAs should be involved in these developments to ensure that approaches developed to measure One Health-related results are adapted for the use of other PPAs as needed. This may include:

i. Defining additional One Health result indicators to address gaps in the BP3 results framework.
ii. Developing improved methodological guidance for project leads. These changes would support a better inclusion of a wider range of One Health-specific indicators in measurement systems at project level and methodological consistency in analyses and resulting monitoring indicators for FAO programmes (including beyond BP3).

Recommendation 3. *For BP3 PPA leadership:* Develop and disseminate guidance such as guidelines and toolkits to help One Health practitioners and project teams integrate gender, youth and inclusion using a One Health approach in collaboration with the Rural Transformation and Gender Equality Division. This may include the following:

i. Developing tools similar to the World Bank's Gender Infectious Disease Epidemic Preparedness and Response Toolkit that assists project implementers and governments to develop gender actions plans for animal health in One Health.
ii. Determining how FAO should collaborate with external partners such as International Livestock Research Institute (ILRI) that are already developing a gender and One Health Framework.
iii. Ensuring that all projects have relevant clear and measurable targets on gender, youth (such as age disaggregation) and inclusion, aligned with the FAO policies such as on gender equality, FAO's corporate strategy on youth, and the forthcoming new Framework on Inclusion.
iv. Strengthening collaboration and coordination with other FAO divisions, units and partners working on gender and social inclusion issues.

1. Introduction

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1.1 Purpose

1 The 134th session of the Programme Committee of the Food and Agriculture Organization of the United Nations (FAO) approved the Evaluation of FAO's One Health (BP3) programme to be presented at the autumn 2024 session (FAO, 2022b). This is the first evaluation by the FAO Office of Evaluation assessing FAO's longstanding work in the area of One Health and it is the second evaluation in a series conducted by the FAO Office of Evaluation, focusing on the Programme Priority Areas (PPAs) defined under the FAO Strategic Framework 2022–2031.

2 PPA better production 3 (BP3) One Health was created under the FAO Strategic Framework 2022–2031 and has its roots in the Organization's decades-long work on issues related to One Health. FAO's work on One Health is framed by the current Strategic Framework, and contributes to the Joint Plan of Action (2022–2026) of the Quadripartite. The Quadripartite is advised by the One Health High-Level Expert Panel (OHHLEP; referred to as the Expert Panel).

3 Given that the One Health (BP3) PPA has existed for only two years, it is premature to assess its outcomes or impacts. Instead, this evaluation provides a descriptive analysis of the evolution and operationalization of One Health from its early genesis to its current role in FAO's Strategic Framework. The results of this analysis provide insights into how the understanding and application of One Health within FAO has evolved over time. The findings and conclusions can inform any future evaluations of One Health.

1.2 Intended users

4 This evaluation will provide the members of the Programme Committee with a strategic overview of FAO's efforts in and contribution to the One Health agenda during the period under review.

5 Within FAO, the evaluation will aid the One Health PPA leadership and project teams by providing insights to foster understanding and operationalization of One Health. The longer-term perspective taken in this report highlights the challenges and successes of integrating One Health into programmes and plans, informing the development of BP3 and FAO's work on the Quadripartite Joint Plan of Action (JPA) (2022–2026). This will help in developing a shared understanding of One Health and refining the new PPA results framework.

6 While not the primary users of the evaluation, external stakeholders such as the Quadripartite partners (the World Health Organization [WHO], the World Organisation for Animal Health [WOAH] and the United Nations Environment Programme [UNEP]) and FAO's resource partners can benefit from understanding the value of their partnership with FAO.

1.3 Scope and objective

7 One Health is a concept that has been used more frequently in the last 15 years and has attracted more attention recently. FAO's work in One Health spans over a decade and has significantly evolved. This evaluation takes a long-term perspective, focusing on the period 2010 to 2023. It begins with FAO formalizing its efforts in One Health with the Tripartite[1] concept note and culminates with the formulation of the PPA-BP3 (One Health).

8 The evaluation is structured around three key areas:

i. defining and operationalizing One Health, including financial and human resources;
ii. measuring progress and results of One Health;
iii. presenting Tri/Quadripartite partners' perceptions of FAO's work in One Health;

[1] After the inclusion of UNEP, the collaboration became known as the Quadripartite.

9 These areas provided the focus to understand the evolution of FAO's work and led to the following three evaluation questions. The complete list of subquestions can be found in the evaluation matrix (Appendix 4).

Table 1 Evaluation questions and the corresponding focus areas

Focus area	Evaluation question
Definitions and operationalization of One Health	How did FAO's work in One Health evolve and how has it been implemented? What was the distribution of health resources?
Measuring progress and results	How were results in One Health interventions measured?
Tri/Quadripartite perceptions	How was FAO's work in One Health perceived by partners and donors?

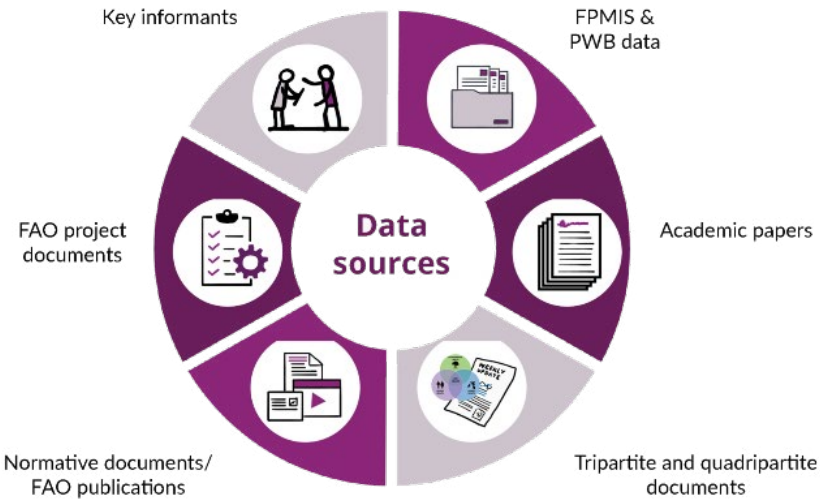
Source: Elaborated by the Evaluation Team.

1.4 Methodology

10 This section provides a brief explanation of the methods used by the evaluation. For more information, see Appendix 2.

11 Figure 1 illustrates the various data sources used to generate and triangulate findings.

Figure 1 Data sources used in the evaluation



Source: Elaborated by the Evaluation Team.

12 The methods employed in the review were:

i. Stakeholder mapping and analysis: different sets of stakeholders were identified per priority question, specifying the rationale for inclusion and the participation method.

ii. Portfolio analysis: The Evaluation Team used two existing datasets for the analysis. The first dataset was the universe of all FAO projects (downloaded from the Field Programme Information System [FPMIS]) from 2010–2023. The total projects for that universe were 11 173. The second dataset included a subset of this universe which included all projects that had One Health in the title and objective; this subset was 113 projects.

iii. Document and literature review: This included a multi-level, contextual review of academic articles and primary documents to collect, summarize and comparatively analyse the evolution of operational definitions of One Health within and outside FAO in the designated period (2010–2023).

iv. Project data analysis: For evaluation question 2 on measuring results, the Evaluation Team identified 113 FAO project documents that contained "One Health" in the title or among its objectives (43 from 2010–2021 and 70 for 2022–2023). All projects from 2010–2021 and 20[2] from 2022–2023 were included in the analysis, which produced descriptive statistics to characterize the methods and indicators used over time to measure the results of interventions between 2010 and 2023. For the remaining questions, such as those concerning evolution, partnerships, and gender and social inclusion, the evaluation considered other projects/efforts that were brought to our attention during interviews/document review.

v. Analysis of human and financial resources: Based on the portfolio analysis, the Evaluation Team conducted a comparative analysis between all projects and One Health projects. The analysis of human resources included the sample of One Health projects and Programme of Work and Budget (PWB) data on staffing by division.

vi. Semi-structured interview: The Evaluation Team conducted semi-structured interviews with 66 stakeholders (55 from FAO and 11 external) to gather insights and perceptions on the evolution of One Health in FAO. The evaluation also benefitted from interviews conducted during the mission to Bangladesh for the evaluation of the Global Health Security Agenda and the discussion during the PPA workshop conducted in November 2023.

1.5 Quality assurance

13 The evaluation benefited from internal FAO Office of Evaluation quality assurance. Additionally, the Evaluation Team recruited a senior technical adviser who provided external feedback on the evaluation design and findings.

1.6 Limitations

14 This evaluation faced two main limitations. First, identifying One Health projects. Since the tagging of BP3 projects started only in 2022, most of the projects from 2010–2021 were untagged. Moreover, since there was no consensus on the definition and criteria for a One Health project during the period under review, and because the definition evolved over time, it was difficult for the Evaluation Team to compile a definitive list of relevant keywords to identify projects. The project analysis was conducted on One Health tagged projects. Consequently, this excluded those projects that did not explicitly use the term "One Health" but may have included a One Health approach. This method was deemed the most reliable because it ensured that the projects that were intended to follow a One Health approach were included.

15 Due to the large scope of the review, a second limitation was access to key players who had either left the Organization or retired. However, the Evaluation Team still interviewed several important figures who shaped the development of One Health thinking in FAO, even if they were no longer with the Organization.

1.7 Structure of the report

16 This report includes four sections in addition to this Introduction. Section 2 provides the context and background of One Health, section 3 presents the evaluation findings, organized around the three evaluation questions and the cross-cutting theme of social inclusion. Section 4 includes the conclusions and recommendations.

[2] Time constraints prevented the analysis of all the project documents (n=70) from 2022–2023. The 20 projects were selected based on budget size and on the availability of documentation in the database at the time of data extraction.

2. Background

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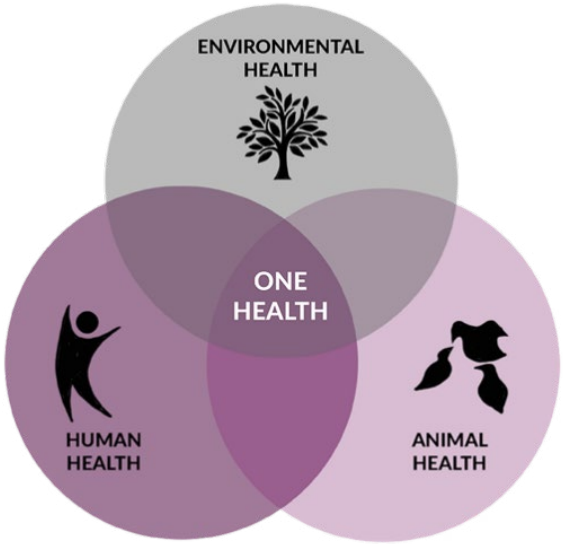
2.1 The emergence of the One Health agenda

17 One Health can be described as an integrative and systemic approach to health, based on the understanding that human, animal and ecosystem health are inseparably connected (Figure 2) (Mettenleiter *et al.,* 2023).

Figure 2 The One Health sectors



Source: FAO. 2024. Investing in One Health for pandemic prevention and preparedness. In: *FAO Investment Centre.* https://www.fao.org/support-to-investment/news/detail/en/c/1411412/.

18 One Health came into being against the backdrop of significant changes in the scientific understanding and global governance of health and diseases, particularly:

i. The sudden and unanticipated emergence of the human immunodeficiency virus (HIV) / acquired immunodeficiency syndrome (AIDS) pandemic in the early 1980s shook assumptions of biomedical and public health experts that infectious diseases in humans (living in high-income countries) had been vanquished (Garrett, 1996, 1994). Outbreaks of Ebola, among others, underscored the fact that for most people in the world, infectious diseases remained an enormous burden.

ii. To understand and address these infections, the concept of "emerging infectious diseases" was developed and mobilized in new frameworks for the governance of infectious diseases that framed emerging infectious diseases as multifactorial problems, the emergence of which were connected to multiple drivers such as globalization, deforestation, human-altered ecosystems, climate change and more. Emerging infectious diseases required approaches that paid particular attention to disease ecology and the interconnections between humans, animals and environments in disease emergence, spillover and spread (Lederberg *et al.*, 1992; Morse, 1990; Morse and Schluederberg, 1990).

iii. Epidemiological surveys indicated that anywhere between 60 to 75 percent of emerging infectious diseases were zoonotic infections (Jones *et al.*, 2008; Morse, 1995; Wolfe *et al.*, 2012). While Ebola and other haemorrhagic fevers evoked widespread fear, outbreaks of avian influenza (H5N1) in Southeast Asia in 1997 and 2003, and severe acute respiratory syndrome (SARS) in 2003–2004, significantly galvanized international attention and collaboration (Fidler, 2003; Scoones & Forster, 2008). Though dominated by concerns to secure and protect human health, the predominance of zoonotic diseases highlighted the roles of and impacts on animal (especially livestock and wildlife) health, food chains and agriculture systems.

19 The mobilization around emerging infectious diseases spurred efforts to create new global health governance structures and mechanisms. A significant development was the revision of WHO's International Health Regulations (IHR), which had previously focused on mitigating the transborder spread of a handful of infectious diseases (cholera, yellow fever, smallpox, plague) that affected human populations. By the early 21st century, the IHR revision process put in place a governance framework that would be oriented towards "public health events and emergencies that have the potential to cross borders", which included zoonotic and animal diseases with the potential to become pandemics.

2.2 The beginning of the Tripartite/Quadripartite collaboration

20 The first call to collective action on "One Health" came in 2004 at a symposium (Wildlife Conservation Society and The Rockefeller University, 2004) convened by the Wildlife Conservation Society (WCS) and supported by the Rockefeller Foundation. The symposium brought together human, animal and environmental experts from FAO, WHO, WOAH, the Centers for Disease Control and Prevention (CDC) and various other organizations to formulate new approaches to emerging infectious diseases and their drivers. The symposium stressed the interconnectedness of diseases among human, domestic animal and wildlife populations and set out an international strategy to tackle them (Cook *et al.*, 2004; Cook Robert *et al.*, 2004).

21 The symposium stressed the importance of recognizing the impact of human activities on health, biodiversity and ecosystems. It advocated a holistic strategy that integrated human, domestic animal and wildlife health under the umbrella of "One World, One Health" (OWOH). This resulted in the Manhattan Principles (see Box 2 in section 3 on findings), which emphasized the interconnectedness of human, animal and wildlife health and the importance of maintaining ecosystem integrity to safeguard biodiversity and healthy environments.

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22 The Manhattan Principles represented a call to action to bring One Health onto global health agenda with FAO, WHO, WOAH and other United Nations (UN) organizations working alongside Members to do so (Schneider *et al*, 2019). One World One Health gained traction primarily because it was framed and perceived as building upon and improving ways to address avian influenza and related emerging or re-emerging diseases. In 2005, the United Staes Agency for International Development (USAID) launched its Global Health Security Program (GHSP) as part of its global response to avian influenza, while the European Union and other Organisation for Economic Co-operation and Development (OECD) governments launched similar programmes, which were important sources of funding and collaboration for FAO and its partners.

23 WHO, WOAH and FAO tended to act within their medical/health, veterinary/trade and agriculture/development spheres, respectively (Hinchcliffe, 2015). During the highly pathogenic avian influenza (HPAI) scares in 1997 and 2004, WHO prioritized pandemic preparedness, WOAH concentrated on establishing standards for virus control and eradication in poultry, while FAO focused on safeguarding poultry value chains – reducing risk within poultry value chains and protecting people that raise poultry. Disagreements on poultry culling policy revealed differences in priorities and means of disease control (Fearnley, 2020). These tensions lay as much within organizations as between them. It was clear that more coordinated approaches to shared matters of concern were necessary.

24 Between 2005 and 2008, a series of International Ministerial Conferences on Avian and Pandemic Influenza served as a crucial platform for the normative elaboration of "One World, One Health". The 2008 Sharm El Sheikh conference marked an important milestone in efforts to embed One Health

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in the global health governance architecture with a new framework[3] developed by FAO, WOAH, WHO, the United Nations System Influenza Coordination (UNSIC), the United Nations Children's Fund (UNICEF) and the World Bank. The *Framework* was an important achievement insofar as it illustrated intersectoral and multidisciplinary collaboration, a core principle of One Health. It retained key organizational elements of the original One World One Health principles. As the document noted: *"The 'One Health' approach denotes a collaborative, cross-sectoral, multidisciplinary mode of addressing threats of infectious diseases at the animal-human-ecosystem interface (animal to be understood as a combination of livestock and wildlife)"* (FAO, WHO and WOAH, 2008.)

25 At the same time, however, the *Framework* was shaped by concerted international collaboration on HPAI in the preceding years (Chien, 2013). The *framework was strongly oriented towards maintaining or enhancing pandemic preparedness planning for influenza (avian, swine, and human) and preventing and controlling* HPAI. The *Framework* built upon and integrated several high-level collaborative initiatives that had been established since 2004 to address HPAI and other animal and zoonotic diseases:

i. 2004: FAO/WOAH Global Framework for Progressive Control of Transboundary Animal Diseases (GF-TADs) formed to empower regional alliances in the fight against transboundary animal diseases (TADs), to provide for capacity building and to assist in establishing programmes for the control of certain TADs based on regional priorities.
ii. 2005: FAO/WOAH Network of Expertise on Animal Influenzas (OFFLU) formed to provide early recognition and characterization of emerging influenza viral strains in animal populations, and effective management of known infections.
iii. 2006: FAO/WOAH Crisis Management Centre for Animal Health (CMC-AH) created to respond rapidly to transboundary animal disease and emerging infectious disease crises.
iv. 2006: Global Early Warning System (GLEWS), a joint FAO/WOAH/WHO tool to provide alerts and early warning messages with forecasting and disease intelligence support.

26 Between 2009 and 2010, several consultation meetings were organized to translate the Framework into action and operationalize the One Health concept. The joint publication of the Tripartite concept note in 2010 formalized the three organizations' commitment to interagency collaboration in developing and promoting One Health approaches within their own houses and among their Members, regions and other partners. In 2022, this alliance, commonly known as the "One Health Tripartite", was extended to include UNEP to adequately address environmental concerns, thereby forming the Quadripartite.

2.3 The One Health High-Level Expert Panel

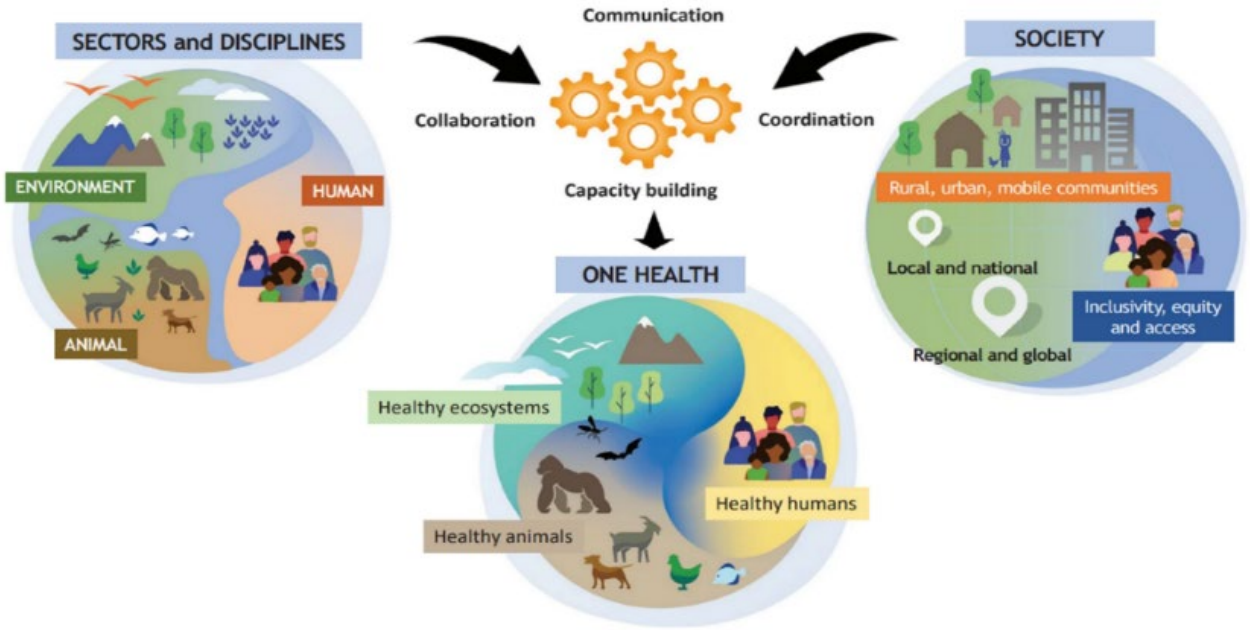
27 The vulnerability of the governing international health system exposed by the COVID-19 pandemic propelled the (then) Tripartite to strengthen their science-based collaboration across sectors; they established a multidisciplinary Expert Panel to offer technical and scientific guidance on One Health matters.

28 In December 2021, the Expert Panel defined One Health as *"an integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals and ecosystems"* (OHHLEP, 2022). *The Quadripartite partners now use this definition, which* builds on concepts from EcoHealth and Planetary Health, emphasizing the interconnected health of people, animals and ecosystems. The Expert Panel's definition focuses on practical intersectoral implementation, highlighting the "4Cs": communication, coordination, collaboration and capacity building. It also ensures that One Health actions are effective, fair, equitable and sustainable. The definition also recognizes the health of humans, domestic and wild animals, plants, and the wider environment (including ecosystems) are closely linked and interdependent.

[3] Complemented by a guidance document drafted by FAO (2008b).

29 Care must be taken in distinguishing between a One Health approach per se and activities that contribute to the health of humans, animals and/or the environment. Several stakeholders referred to FAO as a "One Health" organization, meaning that its work contributed to the health of humans, the environment and/or animals. FAO has been engaged in such work since its creation in 1945, but this differs from the One Health approach defined by the expert panel.

Figure 3 The Expert Panel's One Health definition visualization



Source: Mettenleiter, T.C., *et al*. 2023. The One Health High-Level Expert Panel (OHHLEP). *One Health Outlook*, 5(1). https://doi.org/10.1186/S42522-023-00085-2

30 The Health High-Level Expert Panel consensus definition underpins the Quadripartite One Health Joint Action Plan 2022–2026. The Joint Plan of Action includes, for the first time, a joint theory of change, built on three pathways,[4] four guiding principles and six action tracks each with specific objectives for achieving expected medium-term outcomes.

[4] These pathways include: Pathway 1. Policy, legislation, advocacy, and financing; Pathway 2. Organizational development, implementation and sectoral integration; Pathway 3. Data, evidence and knowledge.

3. Findings

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3.1 Evolution of One Health in FAO

Finding 1. FAO has played a consistent and active role in the evolution of One Health over the last 20 years. It has responded to and participated in broader international initiatives to develop a One Health approach to emerging infectious diseases, pandemic preparedness, food security, food safety and antimicrobial resistance (AMR). Likewise, FAO has taken the lead in establishing international strategic frameworks, mechanisms and instruments crucial to operationalizing One Health as a multisectoral and multilateral approach to these and other challenges at the human-animal-ecosystem interface.

31 FAO's first conceptualizations of and approach to One Health stemmed from its role in international collaborations organized in response to SARS, HPAI and other zoonotic and pandemic threats between 2004 and 2010. FAO representatives participated in the first One World One Health meeting, hosted by the Wildlife Conservation Society and Rockefeller Foundation in 2004. Senior representatives from the Animal Production and Health Division helped to shape the "Manhattan Principles", which remained a touchstone in the development of One Health concepts, approaches and frameworks within FAO, its partnerships and stakeholders.

32 The Manhattan Principles (see Box 1) were developed as a direct response to the threats posed by emerging infectious diseases, of which an estimated 60 to 75 percent were identified as zoonoses. Emerging infectious diseases challenged "siloed" approaches to disease control, which characterized the work of UN bodies, including FAO, in early responses to avian influenza. In framing emerging infectious diseases as complex, multifactorial problems that emerged at the human-animal-ecosystem interface, the Principles set out a distinctive One World One Health agenda that called for multisectoral and multidisciplinary coordination and collaboration on surveillance, monitoring and control of emerging infectious diseases, which transcended species, disciplinary, professional, inter- and intra-organizational silos. Key to this agenda has been a holistic approach that stresses the interconnections of and the need to systematically strengthen the health and resilience of humans, animals (livestock and wildlife) and ecosystems.[5] This agenda has informed FAO concepts and approaches to One Health. Yet, as noted below, FAO has not fully adhered to or carried out the Principles, especially their demand for a broad and integrated focus on ecosystem health and biodiversity.

33 A few developments that are worth noting in the story of the evolution of One Health in FAO up to 2010 include:

i. Between 2004–2008, FAO partnered with WOAH, WHO and other agencies to establish mechanisms for governing, monitoring and responding to HPAI, pandemic influenza, transboundary animal diseases and zoonoses. These included: WOAH/FAO Global Framework for Progressive Control of Transboundary Diseases (2004) and the FAO/WOAH/WHO Global Early Warning System (2006) (GEWS). These partnerships, which remain in place, embedded One Health approaches.

ii. FAO played a leading role in the development of a strategic framework (2008) for interagency collaboration and to guide the development of national One Health plans. "Contributing to One World One Health: A Strategic Framework for Reducing Risks of Infectious Diseases at the Animal-Human-Ecosystem Interface" illustrated intersectoral and multidisciplinary collaboration that was a core principle of One Health.

iii. The 2008 Strategic Framework reframed the Manhattan principles to reflect the agendas and interests of its creators: FAO, WOAH, WHO, the World Bank and UNICEF. Through the Framework, One Health became a guiding approach in the global health governance of infectious diseases, underscoring the basic concept that managing novel pathogens requires collaboration between international agencies, disciplines and professions.

[5] The Manhattan Principles were updated in 2019 (and renamed the Berlin Principles) with a view to reintegrating ecosystem health and integrity while also addressing current pressing issues, such as climate change and antimicrobial resistance (Gruetzmacher ***et al.***, 2021).

Box 2 Manhattan Principles (2004)

1. Recognize the essential link between human, domestic animal and wildlife health and the threat disease poses to people, their food supplies and economies, and the biodiversity essential to maintaining the healthy environments and functioning ecosystems we all require.

2. Recognize that decisions regarding land and water use have real implications for health.

3. Include wildlife health science as an essential component of global disease prevention, surveillance, monitoring, control and mitigation.

4. Recognize that human health programmes can greatly contribute to conservation efforts.

5. Devise adaptive, holistic and forward-looking approaches to the prevention, surveillance, monitoring, control and mitigation of emerging and resurging diseases that take the complex interconnections among species into full account.

6. Seek opportunities to fully integrate biodiversity conservation perspectives and human needs (including those related to domestic animal health) when developing solutions to infectious disease threats.

7. Reduce the demand for and better regulate the international live wildlife and bushmeat trade ...

8. Restrict the mass culling of free-ranging wildlife species for disease control to situations where there is a multidisciplinary, international scientific consensus that a wildlife population poses an urgent, significant threat to human health, food security, or wildlife health more broadly.

9. Increase investment in the global human and animal health infrastructure commensurate with the serious nature of emerging and resurging disease threats to people, domestic animals and wildlife. Enhanced capacity for global human and animal health surveillance and for clear, timely information sharing (that takes language barriers into account) can only help improve coordination of responses among governmental and non-governmental agencies, public and animal health institutions, vaccine/pharmaceutical manufacturers and other stakeholders.

10. Form collaborative relationships among governments, local people, and the private and public (i.e. non-profit) sectors to meet the challenges of global health and biodiversity conservation.

11. Provide adequate resources and support for global wildlife health surveillance networks that exchange disease information with the public health and agricultural animal health communities as part of early warning systems for the emergence and resurgence of disease threats.

12. Invest in educating and raising awareness among the world's people and in influencing the policy process to increase recognition that we must better understand the relationships between health and ecosystem integrity to succeed in improving prospects for a healthier planet.

Source: Wildlife Conservation Society. 2024. *The Manhattan Principles*. https://oneworldonehealth.wcs.org/About-Us/Mission/The-Manhattan-Principles/gad_source/1/gclid/EAIaIQobChMI0NfC8fKRhwMVa5pQBh0j5gIpEAAYASAAEgI5__D_BwE.aspx

iv. FAO and its key partners participated in consultation meetings between 2008 and 2010 that were organized to operationalize the new framework among the key partners - FAO, WHO, WOAH – and stakeholders from other international organizations (World Bank, UNEP). Along with the 2008 Framework, these consultations underscored the wide-ranging commitment to the One Health approach and led to the creation of the Tripartite in 2010.

v. FAO, WOAH and WHO formalized their commitment to collaboration on One Health through the 2010 Tripartite Concept note. However, assessments of early efforts to operationalize One Health point to challenges at global, national and organizational level. Varying interpretations existed of what the concept meant in practice and how it should be implemented. Nonetheless, the collaboration, now known as the Quadripartite after UNEP joined, is still ongoing.

vi. The 2008 Framework called for broadening the One Health strategy of strengthening surveillance and prevention of emerging and re-emerging zoonoses, but there was a lack of consensus on how far the net should be cast, which diseases should be prioritized, or whether a health systems-based approach was preferable (Lee and Brume, 2013; Leboeuf, 2011). These challenges would remain both within the Tripartite and in the development of FAO's own approaches to One Health.

34 Appendix 1 presents a detailed timeline of the evolution of One Health in FAO and key external developments.

Finding 2. The mainstreaming of One Health in FAO has been adapted to its mandate, priorities, technical capacities and internal structures, and aligned to its strategic commitments as the UN's food and agriculture Organization. The prioritization of zoonotic diseases, and especially highly pathogenic avian influenza, in early approaches to One Health enabled FAO to establish a leading role in pandemic preparedness and prevention – areas in which it had not been previously active. FAO thus developed and implemented One Health approaches that played to its organizational strengths and capacities, especially in animal health (AH).

35 The incorporation of One Health in FAO has been driven and shaped by the animal health sector, whose Chief Veterinary Officers (CVOs), specialists, centres and projects have played a leading role in its development and operationalization within the Organization, in regions and countries. Between 2004 and 2008, key centres, coordinating mechanisms and interventions within the animal health sector were either incorporated into or established as part of FAO's response to HPAI. These included: Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases (EMPRES est. 1994),[6] the Emergency Centre for Transboundary Animal Diseases (ECTAD) (2004,) and the Crisis management Centre for Animal Health, and Food Chain Crisis Management Framework (FCC, 2008).

36 EMPRES-AH played an overarching role in animal health sector work that laid important foundations for the development of One Health. Between 1994 and 2004, it provided technical assistance for controlling animal and zoonotic diseases, epizootics and pest emergencies that threatened the agriculture and food chain, with the express aim of fostering socioeconomic and agricultural development in low- and middle-income countries. EMPRES-AH coordinated the rinderpest eradication programme with WOAH and the European Union for the control of foot-and-mouth disease (EU-FMD) programme. Both programmes were notable examples of highly effective intersectoral, cross-disciplinary, and integrated approaches to human-and-animal health that informed approaches to HPAI from the early 2000s.

37 With the emergence of SARS and HPAI, EMPRES-AH pivoted towards positioning its animal health work as essential to pandemic prevention and preparedness, and directly protecting humans from zoonotic threats. Pandemic prevention and preparedness were a new focus. FAO's role stemmed from the recognition of HPAI as an interconnected animal, human and environmental health issue, directly connected to poultry production systems. FAO's animal and veterinary health expertise were made essential to controlling HPAI. ECTAD was created to operationalize and implement the strategy of EMPRES towards pandemic prevention and preparedness and support a coordinated and efficient global response to HPAI. ECTAD's work underpinned FAO's global programme on HPAI between 2004 and 2012. The programme was framed in terms of the "One World, One Health" approach and aligned with the principles outlined in the 2008 Framework (FAO 2008b; FAO 2009a).

38 The FAO approach prioritized the control of avian influenza, and later, other zoonoses and TADs at the source by connecting the development and strengthening of in-country surveillance, vaccination and culling programmes with biosecurity in livestock production systems (Lubroth, 2007; FAO 2008a; WHO, FAO, WOAH, 2008) This approach was integrated with newly established global disease surveillance systems and frameworks (GF-TAD, OFFLU, GLEWS and the Crisis Management Centre-AH [now EMC]), linking together global and country-level systems of control.

[6] Through ECTAD, the FAO Animal Health and Production Division and the Office of Emergencies and Resilience work together to build country, regional and global capacity to forecast, prevent, prepare for, detect, and respond to the emergence, spread and persistence of high-impact health threats of animal origin. See https://www.fao.org/animal-health/our-programmes/fao-emergency-centre-for-transboundary-animal-diseases-(ectad)/en and https://intranet.fao.org/fileadmin/user_upload/FAO_Communications/dgb/dgb04_31.pdf

39 Controlling HPAI at source, through the application of biosecurity measures, was an FAO innovation (FAO, 2003) that set its approach to HPAI apart from WHO and WOAH and played to its organizational and technical strengths (FAO, 2008a; Fearnley, 2020). While biosecurity has acquired different meanings and has been used for different purposes, since its development in response to HPAI it has become an organization-wide approach to disease control, food safety and AMR, and for strengthening agrisystem health and resilience. Some key stakeholders suggested that biosecurity is – or should be viewed as – the essence of FAO's One Health approach. The rationale is that biosecurity is the kind of systems-approach on which One Health is or ought to founded. Research on the role and value of biosecurity in One Health supports this reasoning (Zinsstag *et al.*, 2023).

40 FAO's response to HPAI has served as a model for the Organization's One Health approach, and it would be subsequently adapted to address threats posed by AMR, endemic zoonoses, animal, plant and foodborne diseases to agrifood systems and, especially, to people and animals within livestock economies and societies (FAO, 2012).

Finding 3. The One Health Strategic Action Plan (2011–2015) was developed to embed and integrate One Health principles and priorities into FAO, and to define FAO's strategic capacities and contributions to the Tripartite. The Action Plan facilitated the broadening of One Health work from the emergency response to HPAI to addressing the threats posed to agrifood systems by endemic zoonoses, transboundary animal and aquatic diseases, and foodborne infections, though it did not include AMR. ECTAD's work in regions and countries was especially important to this process and its successes were proof of concept of the value of the animal sector's One Health approach.

41 The 2011–2015 One Health Strategic Action Plan was endorsed by the Programme Committee at its session in March 2011. It reflected agreement by the Tripartite to drop usage of "One World, One Health" and to reframe its collaborative concept as "One Health". The change was important because it allowed each organization to define and develop One Health according their technical and organizational capacities and strengths. The definition used to inform the Action Plan reflected FAO's vision: "*The One Health vision is a unifying force to safeguard human and animal health, to reduce disease threats and to ensure a safe food supply through effective and responsible management of natural resources… One Health represents a holistic vision to address complex challenges that threaten human and animal health, food security, poverty, and the environments where diseases flourish. These problems threaten global health and economic well-being, including international trade. Many of the dangers stem from diseases circulating in animals, transmitted by food or carried by vectors*" (FAO, 2011a).

42 As the definition suggests, the One Health Action Plan was firmly grounded in the priorities of the animal health sector. It was developed by Animal Health (through EMPRES-AH) at the request of the Programme Committee "for the design of a strategy … to establish a robust global animal health system that effectively manages major health risks that arise from and affect animals, paying particular attention to the animal-human-ecosystem interface using the emerging One Health approach, and placing disease dynamics into the broader context of sustainable agriculture, socio-economic development, environment protection and sustainability, whilst recognizing that adequate nutrition is essential for health" (FAO, 2011b).

43 As part this strategic shift, the Action Plan put into practice proposals from the 2008 joint FAO, WHO, WOAH, World Bank and UNICEF Strategic Framework and the Programme Committee to no longer focus on single diseases but rather "to bring benefits to poor communities and agricultural sectors by reducing the risks of infectious diseases that are important locally".[7] This approach aimed to promote surveillance for emerging and neglected infectious diseases at the grassroots level, something the animal health sector, through ECTAD, was well positioned to implement. The Action Plan aligned One Health with FAO's mandate to defeat hunger and positioned it as part of Strategic Objective B (Increased

[7] E.g. Rift Valley fever (RVF), tuberculosis (TB), brucellosis, rabies, foot-and-mouth disease (FMD), African swine fever and *peste des petits ruminants.*

sustainable livestock production) and Strategic Objective I (Improved preparedness for, and effective response to, food and agriculture threats and emergencies) of the 2010–2019 Strategic Framework. At the same time, the Action Plan sought to broaden One Health in FAO as a multidisciplinary and multisectoral approach to disease control, food safety and sustainable agricultural development.

44 While broadening One Health was an important initiative, it predominantly referred to the shift in focus within the animal health sector from the emergency response to HPAI to an approach to managing a broader range of zoonotic and animal diseases, many of which were endemic or neglected, that were chronic challenges to the productivity and resilience of agrifood systems and value chains, and thus to lives, livelihoods and developing economies. The Action Plan did not include AMR as a focus even though it had been recognized as a major and growing issue in livestock production systems and related food chains, and was a priority for the Tripartite.

45 Given the track record under the 2011–2015 Action Plan, especially with the work of ECTAD at country level, one would expect the Programme Committee or Committee on Agriculture to call for a new five-year One Health Action for 2016–2020. However, no such plan was forthcoming. As shown below, the conceptual and practical role of One Health in the 2016–2020 Action Plan on AMR stood in place of an overarching One Health plan for the same period. Nonetheless, the fact that One Health was not integrated into FAO's corporate strategy was recognized early on as key obstacle to developing multisectoral partnerships and work within the Organization.

Finding 4. ECTAD has been the driving force behind the development, implementation and expansion of FAO's One Health approaches at regional and country level for over 15 years. ECTAD's contributions can be attributed to the long-standing funding support it received from the Emerging Pandemic Threats (EPT) programme (EPT-1 2009–2014; EPT-2 2014–2019), the Global Health Security Agenda (GHSA) (2015–2023), among others.

46 ECTAD first established its credentials in implementing FAO's Global Programme for the Prevention and Control of HPAI (2004–2012), which was developed in response to the rapid spread of the disease in Asia, Africa, the Middle East and Eastern Europe as part of FAO's collaboration with WOAH. By 2012, ECTAD had supported or put in place 165 HPAI projects funded through USAID's Emerging Pandemic Threats (EPT-1) programme – the majority of which were in Asia. Over the course of the programme, ECTAD's priorities shifted from immediate, short-term emergency interventions to mid-and longer-term initiatives to improve countries' capacities to develop sustainable biosecurity approaches to eliminate H5N1 from poultry sectors. This shift was later supported by USAID's EPT-2 and the Global Health Security Agenda initiative funding.

47 ECTAD has taken the lead in operationalizing One Health in Member Nations through its support and strengthening of National One Health Action Plans, frameworks, platforms and tools. ECTAD's capacity building on the groundwork established FAO as the driving force in adoption and implementation of One Health. Through these activities, ECTAD fostered collaborative and multidisciplinary approaches to facilitate better understanding of emerging zoonotic diseases, AMR and their contexts, risk assessments, and the development of plans for response and control. The FAO, WOAH, WHO Four-Way Linking Framework (4WL) was developed by ECTAD as an interagency partnership to facilitate and strengthen multisectoral collaboration between human, animal health and agricultural sectors in countries to rapidly respond to, contain and investigate outbreaks of HPAI and other emerging zoonotic diseases. First implemented in Egypt in 2011, the 4WL has become the foundation for Egypt's One Health approach. The 4WL was subsequently expanded to Viet Nam (2011), Indonesia (2012) and Bangladesh (2012). Similarly, since 2016 and in partnership with WHO and WOAH, ECTAD has supported Bangladesh's national AMR strategy and the work of the Bangladesh Antimicrobial Resistance Alliance (BARA). BARA brings together animal and human health professionals to develop and implement guidelines for the respective sectors on how to better and more effectively use antimicrobials in humans and animals. ECTAD-Bangladesh has facilitated monitoring and surveillance of antimicrobial use (AMU) and resistance in Bangladesh's poultry and aquaculture sectors and the development of regulatory frameworks for veterinary antibiotics.

48 ECTAD's track record in disseminating and operationalizing FAO's approach to One Health has not been without its challenges. A 2017 overview of its communications strategy, Seeing Around Corners (2011–2016), noted that "One Health issues and implications are not very well understood at country levels" and that "capacity building approaches and curricula for non-technical audiences do not reflect a multidisciplinary approach" that is essential to One Health. A 2021 review of ECTAD's EPT-2 work noted that "while a central inter-ministerial committee or taskforce is easy to establish, this does not guarantee effective operational links between sectors. There is growing recognition that it is crucial to develop mechanisms that ensure appropriate joint activities in the core functions needed to manage outbreaks".

Finding 5. Work on antimicrobial resistance and antimicrobial use since 2015 involved collaboration between multiple sectors and divisions, further broadening the concept and practice of One Health in FAO. FAO's Action Plans on Antimicrobial Resistance (2016–2020; 2021–2025) exemplify its unique and important role in mobilizing and drawing together its expertise on this issue.

49 One Health concepts and approaches have been the foundation for FAO's Action Plans on AMR. They have built on the understanding that: i) agrifood systems, food chains and agroecological environments (especially livestock systems) all contribute to, and are impacted by, AMR as the foremost global threat to human, animal and environmental health; and ii) as a multidisciplinary and multisectoral organization, FAO has a unique and crucial role to play mobilizing and drawing together its expertise on terrestrial and aquatic animal health and production, forestry and crop production, food safety,

and agricultural regulation to address AMR and antimicrobial use. Work on AMR and antimicrobial use has necessarily involved collaboration between multiple sectors and divisions, which resulted in the further broadening of the concept and practice of One Health in FAO. As such, the 2016–2020 Action Plan on AMR has been recognized by some stakeholders as the "flagship" of FAO's approach to One Health. The 2021–2025 Action Plan continues this process as part of mainstreaming One Health through BP3 and the 2021–2030 FAO Strategic Framework.

50 FAO's first Action Plan on AMR (2016–2020) built on the conceptualization of AMR in the Global Action Plan (2015) as a One Health problem encompassing humans, animals, the environment and agrifood systems that, in turn, requires a coherent, comprehensive, integrated and balanced One Health approach involving different actors and sectors. FAO conferences in 2015 and 2019 underscored the urgency of the growing threat of AMR in all countries and the need to address it through a coordinated, multisectoral, One Health approach in the context of the 2030 Agenda for Sustainable Development. At the same time, FAO Action Plans have underscored FAO's strategic position in the food and agriculture sectors and its capacity to develop a One Health approach to AMR that draws together its collective expertise in animal health and production, food safety, crop production, forestry and resource management across food chains and agrifood systems.

51 Underpinned by One Health principles, FAO Action Plans on AMR have been developed by a multidisciplinary AMR Working Group of Officers from across the Organization. This aims to ensure that all relevant dimensions of AMR in the agrifood system are covered, and that relevant experts and expertise in FAO are included in developing and implementing an organization-wide One Health approach to AMR. The process has differed from the creation of the 2011–2015 One Health Action Plan, which was led by and remained in the domain of Animal Health. While the AMR Action Plans come under the remit of the CVO and Animal Production and Health Division-AH, their development and framing as multidisciplinary and holistic initiatives has encouraged strong and enduring buy-in and participation across FAO.

52 The adoption of the One Health approach was highlighted by the 2021 Evaluation of FAO's role and work on AMR: "Internally, FAO activities on AMR have fallen under Strategic Objectives SO2, SO4 and SO5 till 2019. For 2020-2021, they also fall under SO1 and SO3. These activities span multiple departments and are coordinated through the inter-departmental AMR Working Group (AMR-WG) set up in 2015 under the responsibility of the Chief Veterinary Officer (AGAH). The Group brings together FAO officers from Animal Health and Production Division, the Office of Food Safety, the Secretariat of the Codex Alimentarius Commission (ADFC), the Joint FAO/IAEA Division, the Land and Water Division, the Plant Production and Protection Division, the Fisheries and Aquaculture Department, the Development Law Service, the International Plant Protection, Convention (IPPC), the FAO Strategic Programme teams (SP2 and SP4) and the Office of Corporate Communications. The FAO regional offices and five sub-regional offices have each assigned an officer to participate in the AMR-WG".

53 FAO's One Health approach to AMR builds upon and broadens approaches developed and deployed for animal and zoonotic disease control, plant pest and disease and management, and aquaculture. What sets the One Health approach to AMR apart is that these and other areas (forestry, land and water), along with regulatory frameworks, have been made part of a "whole society" and hence a whole organization response to the multiple drivers and threats AMR poses to human and non-human animals, to food and agriculture systems, and to lives, livelihoods and economies. Unlike previous One Health work on single diseases (HPAI, rabies, salmonellosis) or groups of diseases (endemic zoonoses or TADs), One Health work on AMR has been underpinned by a more inclusive systems approach to health.

54 To foster the implementation of One Health National Action Plans (NAPs), FAO has enabled access to resources and technical networks, deployed ECTAD field interventions and studies promoting good practices, intersectoral communication, and local awareness-raising, and has developed tools to assist countries in extending work on AMR to food and agriculture sectors. The FAO Progressive Management Pathway for AMR (FAO-PMP-AMR), modelled on the PMP for foot-and-mouth disease, is widely used by countries to analyse AMR risks, set priorities and establish step-by-step improvements

in AMR control. ECTAD's country-level AMR activities as well as those of the Multi-Partner Trust Fund (MPTF), and Fleming Fund have facilitated the creation of intersectoral One Health platforms, raised awareness and developed capacity, creating a strong basis for future collaboration and work on AMR.

55 However, translating NAPs into practical action has been challenging. Significant obstacles need to be overcome to implement One Health approaches that have been deemed essential to controlling AMR. The evaluation above found that "there is still limited buy-in from national governments, as evidenced by their limited investment in AMR and capacity to continue without FAO support; […] balancing immediate production imperatives to maintain livelihoods and economies with medium-to-long-term consequences of AMR; […] limited collaboration or co-ordination between animal/veterinary/environmental health and public health personnel or sectors; lack of clear communication about or understanding of the role of One Health approaches in addressing AMR and AMU".

56 In addition to the above obstacles, evaluation of AMR carried out by the FAO Office of Evaluation noted that there has been a tendency in countries, as well as in FAO, to lump AMR together with zoonotic diseases as part of animal health or as a food safety concern, neglecting AMR's much broader One Health nature compared with most zoonoses. Thus, the role of antimicrobial use in plant health, forestry, soil and water tends to be undermined by more well-worn, though important, topics, such as AMU for animal growth promotion.

57 The Codex Alimentarius Task Force on Antimicrobial Resistance (FAO and WHO, 2020), created in 2017, has been developing science-based guidance, standards and surveillance techniques on managing foodborne AMR to facilitate the One Health approach to managing AMR across the food chain.

58 The evaluation of FAO's role and work on antimicrobial resistance referenced above noted that, despite the commitment to a One Health approach to AMR at all levels, as of 2021 FAO lacked "a multidisciplinary approach that sets out the role of all relevant divisions and offices at both headquarters and regional levels" and that it had not demonstrated "a true One Health approach [to AMR] internally". It remains the case that FAO's AMR work has concentrated on animal health, aquaculture, food safety and regulatory frameworks. Meantime, plant,[8] forestry, soil and water teams have had limited involvement. This is understandable given knowledge gaps and priorities in these fields. But the lack of integration of these sectors in AMR limits FAO's commitment to the One Health vision of the Global Action Plan. With the 2021–2025 Action Plan and BP3, FAO has taken more concerted steps to embed the One Health concept of AMR across sectors and divisions within the Organization. Under the One Health umbrella, the AMR-WG has representatives from different FAO Units. Better integration and intersectoral collaboration will strengthen the lead role of FAO's AMR's work as the Organization's "flagship" One Health approach.

Finding 6. One Health was a key part of FAO's COVID-19 Response and Recovery Programme (RRP). While it appears to have played a limited role in the first "immediate response phase" (March–June 2020), with the shift to the second "transition and recovery phase" (from July 2020 onwards), it became the focus of the sixth priority area – preventing the next zoonotic pandemic.

59 With the onset of the COVID-19 pandemic, FAO mobilized its resources and experience to address the emergency. The 2021 Real-time Evaluation of FAO's COVID-19 Response and Recovery Programme - Phase 1 identified several good practices in FAO's "immediate response phase" (March–June 2020) to the pandemic, many of which were rooted in previous One Health approaches to crises and emergencies. These included:

i. leveraging in-house expertise, networks and partnerships to enhance the outreach of FAO's efforts;
ii. applying lessons from previous crises, such as from the Ebola virus outbreak, which showed the need to anticipate and address the continuity of the food supply chain; and

[8] It was reported that at the time of preparation of this report, activities had been initiated in the plant health sector on i) surveillance and reporting on antimicrobial use and antimicrobial residues in food, value chains and environment in partnership with CABI; and ii) promotion of good agricultural practices to reduce antimicrobial use and emergence of AMR.

iii. adopting measures (e.g. forming cross-divisional working groups) that fostered collaboration and improved coordination, planning and alignment of efforts within the Organization.

60 As part of the recovery phase of FAO's response, strengthening and extending the One Health approach for preventing a future zoonotic pandemic (Priority Area 6) was identified as a priority area. The final report of the aforementioned evaluation found that FAO, through its multidisciplinary experts in animal health and communication, and with a wide network of international laboratories, took the lead in developing several global guiding materials and tools aimed at helping countries design, plan and implement their country specific One Health interventions. Findings from previous evaluation reports (described below) suggest that FAO's contributions resulted in positive changes in establishing One Health epidemiological investigation and risk mitigation mechanisms in some countries.

61 Leveraging its extensive experience in deploying One Health approaches to zoonotic and transboundary animal diseases in low- and middle-income countries, ECTAD was at the forefront of FAO's response to COVID-19, where agrifood systems and people's livelihoods and lives were most at risk. Lessons were applied from other zoonotic crises, such as the 2014 Ebola outbreak, which underscored the importance of anticipating and addressing the continuity of the food supply chain. ECTAD's interventions in several countries (i.e. Bangladesh, Indonesia, Cameroon and Ghana) demonstrated the value of One Health in preparing for outbreaks, mitigating emergencies and addressing zoonotic diseases at source. ECTAD's work was thus crucial for Priority Area 6 of the RRP and for pointing the way forward for strengthening and extending One Health in FAO Member Nations and regions. Examples of reported ECTAD contributions include building capacity for:

i. Testing. In Indonesia, ECTAD assisted animal health laboratories in testing human samples for COVID-19, providing crucial surge support for public health labs. Building on years of work to strengthen the capacity of veterinary laboratories to detect infectious disease in animals, FAO equipped seven animal health labs to test human samples for the SARS-CoV-2 virus and trained nearly 100 laboratory staff. As a result, more than 70 000 human samples were tested at animal health labs.

ii. Surveillance. In Cameroon, ECTAD trained livestock and healthcare staff on COVID-19 case detection, investigation and management skills, capacitating veterinary services to support public health services in the response to the pandemic.

iii. Tracing. In Ghana, ECTAD supported veterinary laboratories to install a laboratory information management system to improve the traceability of samples tested for COVID-19 and other infectious diseases.

62 As part of its coordinating role, the FAO Office of Emergencies and Resilience facilitated the implementation and extension of One Health work in the COVID-19 Response and Recovery Programme. Its Global Programme Support put global-level coordination and advocacy plans in place to reduce the risks of transmitting COVID-19 along food supply chains. The Office brought together WHO, WOAH, the International Labour Organization (ILO), who then along with FAO's joint Office of Emergencies and Resilience/CJW EMC platform, technical divisions – Animal Production and Health Division, Agrifood Systems and Food Safety Division, Fisheries and Aquaculture Division, Rural Transformation and Gender Equality Division, Partnerships and UN Collaboration Division, the FAO Office of Communications – and Decentralized Offices generated, translated and circulated technical One Health-related knowledge into locally tailored and usable products during the pandemic.

63 These examples complement the ones mentioned in the "Measuring Results" section of the report.

Finding 7. The inclusion of One Health in the FAO Strategic Framework 2022–2031 marks an important development in the evolution of the approach in the Organization. It also reflects a significant change in the operational definition of One Health in FAO. It is largely based on the 2021 One Health High-Level Expert Panel definition, which was agreed and adopted by the Quadripartite, and provides a holistic vision of One Health in FAO's broader strategic aims of sustainable agrifood systems for all beyond disease-based approaches.

64 Programme Priority Area BP3 represents the first time One Health has been made a stand-alone programme area in a strategic framework. The previous Strategic Framework (i.e. 2010–2019) either did not specifically reference or operationalize One Health or made minimal reference to it as an approach. BP3 One Health marks an important step in adopting and mainstreaming One Health within FAO.

65 Internal and external interviewees noted that FAO's work in One Health at all levels over the last 15+ years and the strong support from the Director General and upper management were essential for establishing the One Health PPA. Analysis of interviewee responses suggests that there is strong support for the view that One Health is fundamental to FAO's mandate, suited to the Organization's comparative advantage and organizational identity.

66 BP3 is grounded in and builds upon precedents in FAO's work in animal and zoonotic diseases, AMR and food safety. But is also driven by a new agenda to "mainstream" One Health within FAO. The rationale is that, as an approach, One Health captures and reflects the organizational essence of FAO as a multidisciplinary body. One Health can thus harness and better operationalize FAO's capacities in working across disciplines, divisions and sectors to achieve the broader objective of improving and optimizing the health, resilience and productivity of agrifood systems.

67 Unlike previous definitions, which focused on threats to human and animal health, the Expert Panel definition frames One Health as an approach that "aims to sustainably balance and optimize the health of people, animals, and ecosystems". While the approach includes zoonoses, animal diseases and AMR, it is widened to address "the full spectrum from prevention, health improvement, and health promotion to the detection, preparedness, response, and recovery from health crises". This marks an important new commitment to a holistic vision of One Health in FAO's broader strategic aims of sustainable agrifood systems for all. While zoonotic diseases played a catalytic role in FAO's take up of One Health, there were other sectors that were also looking at the intersection of human, animal and environment health. EMPRES Plant Protection addressed plant health issues globally, regionally and nationally. These included critical work on locust emergencies (e.g. monitoring, preparedness and response) as well as pests and diseases of crops that were critical for food security and protecting livelihoods.[9] The definition recognizes that the health of humans, domestic and wild animals, plants and the wider environment (including ecosystems) are closely linked and interdependent. Although plants are part of the ecosystem, they often get overlooked. As a result, plants tend to escape the attention of policymakers at all levels. Nevertheless, the definition marked a shift from longstanding disease-focused approaches to health-system approaches that were first promoted in the Manhattan Principles and that have been promoted in One Health research for some time.

68 To support this process and to help synergize FAO's One Health work across the Organization, FAO launched a cross-cutting interdisciplinary One Health Technical Working Group (OH-TWG) in July 2021. The OH-TWG[10] aimed to help mainstream One Health and to understand and address connections between biodiversity, food production and the health of people, animals, plants and the environment. Some reported contributions of the working group include inputs to developing the Quadripartite One Health Joint Plan of Action and its implementation Guide, the United Nations Sustainable Development Cooperation Framework (UNSDCF) guide on One Health, and the contribution to developing the OHHLEP One Health Inventory tools. Stakeholders interviewed supported the working group, yet some questioned its effectiveness, with some expressing the perception that it seems animal health-centric rather than a broader, inclusive effort. Some commented that there was more talk about intersectoral collaboration than action. This was attributed to several factors, including time-constraints, ongoing divisional priorities and availability of resources.

[9] This includes the IPPC Secretariat involvement in AMR to support the prevention of the spread of the plant pests through the development of International Standards for Phytosanitary Measures (ISPMs). It is important to note that the IPPC Secretariat presented a paper titled "The IPPC Community and One Health" to the Commission on Phytosanitary Measures (CPM) session of October 2021 (CPM-15). In it, the Secretariat stated that it was collaborating with the BP3 team.

[10] Coordinated by the One Health and Disease Control Group in NSA.

69 In placing One Health under the better production pillar (BP3), the Animal Production and Health Division and the Office of Emergency and Resilience have been tasked with coordinating and mainstreaming the more inclusive approach to One Health across the Organization.[11] While some stakeholders view this as potentially reinforcing the long-standing connections between One Health and the animal health sector, others have noted that One Health can and should serve as a cross-cutting platform for strengthening the resilience, productivity and sustainability of agrifood systems, which are crucial goals of "building back better" in the Strategic Framework.

70 By virtue of its lead role in implementing BP3, the Animal Production and Health Division has taken significant steps to align its activities to FAO's broadened vision of One Health. The Animal Production and Health Division has positioned the expansion and improvement of One Health in agrifood systems as key to global health security, to improving human, animal and ecosystem health and resilience, and to FAO's Agrifood Systems Transformation agenda. To achieve these aims, a dedicated One Health and Disease Control Group (NSAH/CJW) has been created as part of a restructuring of the Animal Production and Health Division to integrate and coordinate the many strands of One Health work in the Organization.

71 The EMPRES-AH programme, along with ECTAD and the EMC, remain the key platform for developing and implementing One Health country-level strategies and policies for improved early warning, prevention, timely response and long-term management of high-impact transboundary and emerging diseases, including zoonoses, which are vital to improving the resilience of agrifood systems and to pandemic prevention and preparedness. Since 2022, EMC has broadened its approach beyond animal health to support plant health in its work to build country capacity for emergency management. Under BP3, NSA through EMPRES-AH (FAO, 2022c) has implemented One Health approaches to improve Members' capacity to prevent and control high-impact diseases.

72 Biosecurity is a crucial, but sometimes overlooked, component of One Health. The recent (2022) decision to establish a Progressive Management Pathway for Terrestrial Animal Biosecurity, along with Progressive Management Pathways for AMR, aquaculture and bees, represents a crucial step in consolidating two decades of FAO experience in deploying biosecurity measures for zoonoses, animal diseases, food safety and AMR in countries around the world. Furthermore, normative work and capacity building efforts of the International Plant Protection Convention contribute to achieving safe trade of agricultural goods and minimizing risk of plant pest spread. Biosecurity is now an essential component of BP3 and the One Health-Joint Plan of Action, and is key to establish One Health as an integrated, science- and evidence-based approach to strengthening agrifood system resilience at all levels.

73 One Health has long been recognized as an essential approach to food safety across the entire food chain (from field to fork). The approach has, for example, informed standard-setting work of the Codex and FAO's biosecurity work on food safety in Member States. While the Strategic Framework includes a PPA on food safety (BN3: Safe food for everyone), One Health only garners a single footnote, and no reference is made to its role in the framing or implementation of BN3. Stakeholders in food safety view this as a missed opportunity to recognize the inter- and intersectoral nature of food safety as a crucial One Health problem that can be a vehicle for building and broadening the approach beyond zoonoses and AMR.

74 Integrating the environment into One Health is one of the six action tracks of the Quadripartite's One Health Joint Action Plan (see Table 4). It is a response to the comparative lack of focus on the environment (or ecosystems) in previous One Health frameworks of FAO, WHO and WOAH, and reflects the enhanced role of UNEP in the partnership. FAO's approach to integrating the environment into its One Health PPA closely aligns with the Strategic Framework's broader goals to transform agrifood systems. How FAO defines the environment is crucial to this process. While referring to the environment or the ecosystem, essential elements also include crops, forests, soil, water, air and microbial agents. Previous concepts tended to circumscribe the environment to places or habitats from

[11] CJW was previously tasked as the lead, with the Animal Production and Health Division and Office of Emergencies and Resilience as co-lead.

which pathogens or resistant microbes emerged, spread and threatened agrifood systems. While this view remains dominant, evidence suggests that FAO has started to embrace the broader and more holistic concept of the environment reflected in the Expert Panel definition of One Health, which is reflected in new One Health project areas on soil, water pollution, climate change and biodiversity.

75 The Evaluation Team identified several challenges to the effective implementation of One Health, especially at national and subnational levels. The most significant include: the professional segregation and disparity between the animal health/production and the public health sectors in terms of financial resources and the labour force; the insufficient involvement of natural resource sectors; and the lack of intersectoral policies and legal frameworks for evidence-based decisions. None of these challenges are new. FAO has the experience and know-how to help address them on a country-by-country basis, but stakeholders interviewed suggested that putting One Health into practice also requires a change in "mindset" or "paradigm shift" in ways of working together and sharing knowledge and expertise.

3.2 One Health projects' financial and human resources 2010–2023

Finding 8. The evaluation identified a total of 113 One Health projects implemented during the period under review. There are more projects at country level, but global level projects have more of the funding. In the last two years, important funding opportunities at the country level have emerged, and this may benefit FAO activities thanks to its presence and experience in the field.

76 The Evaluation Team tagged a total of 113 projects as being One Health, with a total budget of USD 331 096 936. All these projects had either "One Health" in their title and/or in their objectives, as described in section 1.4 on methodology.

77 An analysis of the distribution of the management of projects and their funding over 2010–2023 was conducted, comparing FAO's project portfolio with One Health tagged ones (see Table 2). Both portfolios have most of their projects located at the country level, followed by global and then regional level. However, a major difference emerges in terms of the funding distribution by location, where 51 percent of One Health project funding is for globally managed projects.

Table 2 2010–2023 geographical and funding distribution: all FAO projects vs One Health tagged projects

	Location		Budget	
Geographical coverage	**All FAO projects**	**One Health projects**	**All FAO projects**	**One Health projects**
Global	12%	17%	19%	51%
Regional	6%	11%	4%	6%
Subregional	4%	4%	2%	1%
Country	78%	69%	75%	42%

Source: Elaborated by the Evaluation Team, based on FPMIS data.

78 Stakeholders indicated, and document reviews confirmed, that in the last couple of years new funding opportunities for One Health projects have emerged at the country level, particularly the Pandemic Fund. The Pandemic Fund in 2022, with USD 1.7 billion raised to date, is a major resource partner in One Health. The Fund aims to invest in pandemic prevention, preparedness and response. Funded projects are to target gaps in surveillance, laboratory capacity, risk communication, zoonotic disease and risk management, among others.

79 In the case of the Global Health Security Program, which is the next phase of the Global Health Security Agenda, USAID has delegated funding decision-making authority to its Country Offices, allowing them to determine how their One Health funds are awarded. Under the previous fund disbursal arrangement, rolling funding amendments were agreed between FAO headquarters and the central USAID programme team. This greatly explains why 51 percent of the One Health budget distribution has been global, since Global Health Security Program's predecessor was a large contributor (32 percent of One Health funds). Under the new approach, the relationship between FAO and USAID Country Offices becomes critical.

80 Beyond FAO having to re-assess how it will adjust to country-specific changes, if more country level funding opportunities emerge, this would suggest the need to identify how future One Health projects can best access those resources. The presence at the regional and country levels of FAO in general, and ECTAD teams in particular, is a strength given their track record and familiarity with local developments. A case in point has been ECTAD's country and regional support and leadership in developing Pandemic Fund proposals.

Finding 9. Within headquarters, the Office of Emergencies and Resilience is the main budget holder of One Health projects, followed by the Animal Production and Health Division. Other divisions are budget holders for a small number of One Health projects. This reflects the historical evolution of FAO work in One Health being spearheaded by the animal health sector.

81 One Health projects have mostly been implemented in an emergency and resilience context. This is not surprising given the One Health portfolio's early focus on activities related to animal health, such as emerging threats and zoonotic crisis and later on AMR, as detailed in the section addressing focus area 1 of the evaluation. While emergency tagged projects constitute 30 percent of the overall FAO project portfolio, 60 percent of the One Health project portfolio is tagged as emergency.[12]

82 Under the Strategic Framework (2010–2019), ECTAD's work was part of Strategic Programme 5 (SO5: Increase the resilience of livelihoods to threats and crises) that organized FAO work around the concept of resilience. SO5 included critical animal health projects, such as the Emerging Pandemic Threats 2 and the Global Health Security Agenda. These projects were implemented by ECTAD, which as previously mentioned, is a joint operational platform between the Office of Emergencies and Resilience and the Animal Production and Health Division, providing operational support and technical leadership respectively.

83 For the overall FAO project portfolio, the Office of Emergencies and Resilience is the fifth largest budget holder in the Organization, after conflict-stricken Country Offices (Afghanistan, Somalia, South Sudan, and Yemen). An analysis of One Health tagged projects shows that the Office of Emergencies and Resilience is the main budget holder, responsible for 37 percent of those projects' budgets; followed by the FAO representation in Bangladesh (9 percent), the Animal Production and Health Division (8 percent), the Regional Office for Asia and Pacific (6 percent, and then the Joint FAO/WHO Centre for Zoonotic Diseases and AMR (CJWZ) (4 percent).

84 The evaluation team identified 11 FAO headquarters-level divisions whose work may use or promote a One Health approach (see Table 3). Of those, the Office of Emergencies and Resilience and Animal Production and Health Division have the largest number of One Health projects and budgets. Seven of the eleven divisions do not have projects tagged as One Health and are not budget holders at all, even though they may be working using the One Health approach.[13]

[12] The overall FAO project portfolio from 2010 to 2023 comprises one-third classified as "emergency" projects (n=3 376 projects) and two-thirds as "non-emergency" projects (n=7 797 projects). One Health projects designations consist of 60 percent (n=68 projects) emergency and 40 percent (n=45 projects) as non-emergency.

[13] In the case of the Legal Office, it is not surprising because of their funding mechanism.

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85 Although not a division, the Joint FAO/WHO Centre (CJWZ) has three One Health projects and is budget holder of 4 percent the One Health projects' budgets. This is important because of the technical and administrative closeness between CJWZ and Animal Production and Health Division; if combined, they are budget holders for 12 percent of the One Health projects' budgets.

86 The 16 One Health projects for which 4 headquarters-level divisions are the budget holders account for 47 percent of the budget of all One Health tagged projects in FAO. The remaining 97 One Health projects (equivalent to 53 percent of the One Health project budgets) are distributed over 40 different organizational units (for example country, subregional offices). This allocation reflects the significant role of decentralized offices in managing One Health initiatives, underscoring the importance of field-level implementation and coordination.

87 As new funding opportunities emerge (see Finding 8), especially at the country level, there is a potential to further expand the group of budget holders, not only geographically but also their technical/sectoral profile. For example, 12 FAO projects worth close to USD 60 million were approved during the first round of the Pandemic Fund call for proposals, of which six have Country Offices as the budget holders. Nonetheless, there is room for more involvement of other technical disciplines through a One Health approach (see Finding 10).

Table 3 One Health-related divisions: as budget holders for all projects vs One Health projects' 2010–2023

Division	Budget holder of all projects	Number of One Health projects	Budget holder of One Health projects
Office of Emergencies and Resilience	6%	8	37%
Forestry Division	4%	0	0%
Fisheries and Aquaculture Division	2%	0	0%
Partnerships and UN Collaboration	1%	1	1%
Land and Water Division	1%	0	0%
Plant Protection and Protection Division	1%	0	0%
Animal Production and Health Division	1%	6	8%
Food and Nutrition Division	<1%	0	0%
Agrifood Systems and Food Safety Division	<1%	1	1%
South-South and Triangular Cooperation Division	<1%	0	0%
Legal Office	<1%	0	0%

Note: It is important to note that these 11 divisions do not encompass all headquarters divisions (nor all FAO organizational units globally). Consequently, the budget distribution does not sum up to 100 percent.

Source: Elaborated by the Evaluation Team, based on FPMIS data.

Finding 10. FAO One Health projects are concentrated in the areas of health systems, emerging zoonoses and antimicrobial resistance when mapped along the six action tracks of the One Health Joint Plan of Action. The Animal Production and Health Division had the technical lead for 60 percent of One Health projects.

88 The six action tracks of the Quadripartite's One Health Joint Plan of Action 2022–2026 (see Finding 17) provide useful technical categories for analysing FAO's One Health project portfolio (see Table 4).

Table 4 Percentage of the One Health portfolio budget distributed across the six Joint Plan of Action tracks

Budget percentage	Joint Plan of Action actions tracks
54	**Action track 1**: Enhancing One Health capacities to strengthen health systems
24	**Action track 2:** Reducing the risks from emerging and re-emerging zoonotic epidemics and pandemics
15	**Action track 5:** Curbing the silent pandemic of antimicrobial resistance
5	**Action track 4:** Strengthening the assessment, management and communication of food safety risks
1	**Action track 3:** Controlling and eliminating zoonotic, neglected tropical and vector-borne diseases
1	**Action track 6:** Integrating the environment into One Health

Source: Elaborated by the Evaluation Team.

89 Using the six action tracks to analyse the distribution of FAO's One Health project portfolio, the results show the emphasis given to strengthening of health systems (Action Track 1) with 54 percent of the projects addressing the issue. This is followed by preventing and controlling emerging zoonosis (Action Track 2) with 24 percent and curbing antimicrobial resistance (Action Track 5) with 15 percent. These three action tracks account for 93 percent of the budget in the portfolio (see Table 4).

90 The Global Health Security Agenda has been implemented through actions mainly pertaining to Action Track 1, as these are geared to build capacity to respond to different threats, covering transboundary animal diseases, zoonoses and antimicrobial resistance.

91 In the One Health project portfolio, the Animal Production and Health Division takes the technical lead of more than 60 percent of the projects. It is followed by the Joint FAO/WHO Centre (CJWZ) with 11 percent and the Agrifood Systems and Food Safety Division with 3.5 percent of the projects.

Finding 11. Reliance on One Health project funding as a means of hiring staff has some negative consequences in terms of building institutional capacities and reducing efficiencies.

92 Two sources were used to analyse the human resources distribution across One Health-related divisions: the Programme of Work and Budget for regular staff and the project documents for non-regular staff (mostly consultants).

93 As detailed in Table 4, the Programme of Work and Budget aggregate staffing data for 2010–2023 period shows that the Fisheries Division had the most staff, with 27 percent of the total of One Health selected divisions, followed by the Forestry Division with 15 percent, and the Plant Protection and Protection Division with 14 percent rounding off the top three. The Office of Emergencies and Resilience is the office with the least Programme of Work and Budget personnel (1 percent) though it has one of the largest funding of those related to One Health. Similarly, CJWZ also has 1 percent.

Table 5 Programme of Work and Budget human resources distribution across One Health-related divisions 2010-23

Divisions	Percentage of total HR (%)
Fisheries and Aquaculture Division	27%
Forestry Division	15%
Plant Protection and Protection Division	14%
Food and Nutrition Division	9%
Animal Production and Health Division	9%
Partnerships and UN Collaboration	6%
Land and Water Division	6%
Legal Office	6%
South-south and Triangular Cooperation Division	%
Food Systems and Food Safety Division	3%
Office of Emergencies and Resilience	1%
CJWZ	1%

Source: Elaborated by the Evaluation Team, based on data from the Programme of Work and Budget (2010-23).

94 An analysis of the One Health projects' budgets found that on average, one-third of the funds (31 percent) were for human resources. This means that out of the USD 331 million total One Health project portfolio, approximately USD 110 million were dedicated to human resources (e.g. consultants). This means, for example, that ECTAD relied heavily on consultants. Initiatives such as ECTAD and country-level One Health work such as that in Bangladesh are examples of efforts that have significant non-staff human resources. In other words, the Office of Emergencies and Resilience as budget holder, and grant and operational managers of One Health programming allocated funds across the Organization to build institutional delivery capacities. Financial resources were used to create over 400 positions within several divisions, sub/regions and at country level under ECTAD.

95 Interviewees at the regional level expressed that there are some negative consequences of using projects as a means of hiring staff to do long-term work, which are by FAO rules, short-term contracts. One consequence that was identified is the difficulty in building internal mid- or long-term competencies within a team. Another was the additional administrative burden and to some extent a loss of efficiency. These perceptions had already been pinpointed in the SO5 evaluation executive summary (ES43): "*The lack of predictable resources in Strategic Programme 5 deprives FAO of the ability to invest over the long term in promising resilience services and in its own personnel. Most of the personnel working on Strategic Programme 5 (national and international) are hired under consultancy contracts with extremely short contractual periods. This creates an unnecessary administrative burden, affects staff morale, efficiency and retention, and disrupts the durability of FAO's support in resilience*".

96 ES42 of the SO5 evaluation also stated: "*The Organization has never invested much of its core, regular resources in this area* (resilience)*. This funding model continued to some extent with Strategic Programme 5 as well, in that the Strategic Programme has benefited from very limited Regular Programme resources. As a result, the implementation of the SO5 vision and philosophy, as described in the FAO Strategic Framework, relies largely on external, short-term funding over which FAO has little control*".

3.3 Measuring One Health projects' results

Finding 12. One Health was not explicitly articulated in the 2010–2019 FAO strategic Framework outcomes, even though work on the subject had been conducted. The approach used to monitor One Health related results during that period relied mainly on aggregated output and outcome indicators. This approach lacked a qualitative analytic dimension, which did not allow to truly assess changes and progress in the implementation of the One Health approach, as well as its impact. The evaluation found no specific guidance for monitoring One Health-results during that period, neither at the strategic level nor at the project level. However, some projects had indicators that monitored certain One Health specific dimensions, such as collaboration and coordination, though these were not standardized.

97 In the 2010–2019 FAO Strategic Framework, there were no explicit strategic outcomes related to One Health, even though the use of the term "One Health" was present in some project titles, objectives and related documentation as described in in Appendix 3, Box 1.

98 The evaluation conducted an analysis of project documentation (i.e. project document and terminal reports when available) from 31 projects[14] implemented between January 2010 and December 2021 (see Appendix 3, Box 1, for a descriptive overview of these projects). The analysis suggests that the result measurement system used during that period was mainly based on the monitoring of predetermined aggregated result indicators in the form of a result-chain matrix (logframes) that specify expected

[14] A total of 43 projects that used the terms "One Health" in their title or objectives were found in the FPMIS database for the period 2010–2021. Five projects were excluded from the analysis because they were baby projects of other projects included (n=2), because they were not interventions (n=1; Development of the Surveillance and Information Sharing Operational Tool [SISOT] tool), or because no documentation was available (n=2). Six projects implemented in 2020 and one in 2021 were country projects of the GHSA in Asia and used the same type of result indicators. They were considered as one project for the description.

outputs for each outcome. Outcomes sometimes had dedicated indicators while expected impact indicators were present in only a minority of project documents.

99 Most projects set baseline, targets and means of verification for each indicator. Output indicators were mainly formulated either as assessments of project activities completed (e.g. "Coordinated mechanisms for the evaluation of One Health operationalization are in place") or as quantifiable observations (e.g. "Number of meetings jointly participated by the ministries on the One Health coordination mechanism"). When available, outcome indicators were formulated in the same vein (e.g. "Number of countries whose AMR multisectoral coordination mechanisms engage with a broad range of relevant partners"). A narrative description of results was often provided in terminal reports, which mostly summarized the main outputs and outcomes, with little to no analysis of how FAO contributed to significant changes.

100 These limitations do not seem to be specific to One Health project monitoring and evaluation (M&E), as they were also reported in the conclusions made previously in the context of the Evaluation of FAO's Strategic Results Framework conducted in 2019: "*FAO's Results Framework, in its current form, does not sufficiently delineate the contribution pathways and intermediate milestones that translate FAO's outputs into collectively owned outcomes. Abstract, high-level outcomes do not adequately reflect normative contributions, while indicators focus on production rather than on uptake of knowledge. Results remain focused on FAO's outputs and do not sufficiently emphasize or specify the principal contributions or levels of effort and accountability required of FAO and its key partners, particularly governments and donors, to achieve national outcomes.* ». The report also states that: "*The Results Framework's emphasis on aggregate reporting lacks a qualitative dimension, offering few insights into the progress of change and the longer-term impacts of FAO's work in terms of livelihoods and food systems. The results do not tell the story of how and where FAO has improved food systems, livelihoods, resilience and sustainability, or made a meaningful difference to ecosystem or environmental health.* » (FAO 2019)

101 The analysis of a sample[15] of projects implemented in 2022–2023 suggests that the limitations of the One Health result measurement system identified during the earlier period also apply to more recent times. The analysis of the One Health projects implemented in 2022 and 2023 shows the inclusion of some One Health related indicators, also primarily related to intersectoral collaboration at a high level. Results indicators, such as those during the previous period (2010–2021), were little changed to those for 2022–2023; they focused on improving national and international One Health systems, such as enhancing early warning systems for zoonoses and AMR, strengthening resilience in agrifood systems, and building One Health competencies. They track outputs such as the implementation of surveillance tools, resource development, piloting of frameworks, delivery of online learning courses and monitoring of professional development systems.

102 As One Health was not explicitly integrated into the previous strategy, project leads could not readily align their result indicators with the strategy's higher-level theory of change, indicators and targets. The evaluation found that although general guidance existed (FAO, 2014; n.d.) to support the design of projects and the development of results frameworks, none were available to assist in the choice and definition of One Health related result indicators.

103 Interviews with selected Lead Technical Officers (LTO) responsible for One Health projects during this period showed that the process of developing an M&E framework at project-level under the previous strategy (2010–2019) was under the responsibility of project leads; with the choice and definition of One Health related result indicators used at the project level also under their responsibility. The LTOs interviewed mentioned that the choice and definition of One Health-related indicators were usually developed in collaboration with resource partners and countries. They reported that some resource partners have specific results frameworks and/or requirements for M&E, that were used to report progress and results.

[15] Twenty projects selected as detailed in section 1.4 on methodology.

104 The content analysis of results indicators available in the project documentation suggests that most One Health projects reviewed included some indicators that are coherent with important dimensions of One Health, mainly addressing "One Health related" targeted elements of intersectoral collaboration and coordination (see Appendix 3, Table 1 and 2). These included indictors at the output level, for example "Consolidation of a network of One Health experts at the regional at national level" (project implemented in 2020), or "Number of countries in which National Action Plans have been developed engaging multisectoral stakeholders" (project implemented in 2016); and sometimes there were indicators at the outcome level as mentioned above (see Appendix 3, Table 2). Likewise, very few projects included clear intersectoral impact indicators. One such example was: "Reduction in prevalence of antimicrobial resistant microorganisms detected in food, feed, animals, environment".

105 These indicators correspond mainly to two dimensions of One Health operations related to "Planning" and "Working" of the Network for the Evaluation of One Health (NEOH) "One Heath-ness" evaluation framework (see Appendix 5) (Rüegg *et al.*, 2017; 2018). A third dimension of One Health operations proposed by the NEOH framework is "Thinking", which looks at how initiatives were developed with a system thinking approach, by incorporating all important components, sectors and disciplines in the project design. The Evaluation Team found no evidence of indicators related to One Health thinking in the results indicators extracted from One Health project documents.

106 The content analysis also showed that some One Health-projects included result indicators targeting another dimension of One Health related to supporting infrastructures and corresponding to the concept of "Sharing" in the NEOH framework, especially projects that included a surveillance component. For example, one outcome indicator in this category was "Data collection systems and sharing mechanism on antimicrobial use established for monitoring and surveillance" (project implemented in 2021) (see Appendix 3, Table 2).

107 The evaluation found no evidence of integration of indicators related to the remaining two dimensions of One Health supporting infrastructures of the NEOH framework: i) "Learning", which aims to assess how a project influenced the knowledge and practices of the individuals, teams and organizations involved; and ii) "Systemic organization", which aims to evaluate how balanced the leadership between different sectors and organizations involved in the project is (an important dimension related to equity and One Health).

108 Overall, the formulation of One Health result indicators found in project documentation was not harmonized across projects implemented during the previous strategy; these frequently lacked clarity and were often vague. For example, indicators such as "Cross-sectoral collaboration is implemented" were noted several times but with no specification of which sectors should be integrated during project implementation and/or with no specification of the expected level of collaboration. There were also some issues with the alignment of the stated outputs and their indicators. One example was an output formulated as: "Collaboration between human and animal health systems is improved nationally and regionally", while its indicators were "Number of One Health national or regional policy documents formulated/reviewed; Number of joint risk assessment (JRA) training conducted at national level; Number of disease-specific joint preparedness and response plan developed or revised". While it is true that these activities necessitate collaboration between human and animal health systems, these indicators are inadequate to monitor the improvement in collaboration between these sectors.

Finding 13. Although the result measurement system for One Health did not change significantly during the period of the previous strategy (2010–2019), major changes were introduced with the inclusion of better production 3-One Health in the new FAO Strategic Framework 2022–2031.

109 Both document analysis and interviews suggest that the measurement system for One Health related results was framed by the reporting requirements of the FAO Strategic Frameworks (2010–2019 and 2022–2031). Under the 2010–2019 Strategic Framework, the FAO Strategic Results Framework was organized around five strategic objectives, which did not include any specific objective for One Health, and no macro level result indicators for One Health.

110 The analysis of project documentation suggests that the approach used to measure One Health results at project-level (the "how") did not change significantly during that period and was based mainly on the monitoring of aggregated output and outcome indicators as described in Finding 12. On the other hand, some evidence suggests that the nature of One Health-indicators (the "what") has changed gradually over this period, with the inclusion of indicators more aligned with the One Health approach (see Finding 12).

111 The explicit inclusion of One Health in the Strategic Results Framework came with the new FAO Strategic Plan 2022–2031 (FAO, 2009b; 2013) under Programme Priority Area better production 3 (BP3-One Health). The 2022–2031 FAO Strategic Framework is based on a clear theory of change and a results framework was developed for each PPA, including BP3. The Strategic Results Framework details for each PPA: the gaps, expected outcomes, SDG targets and indicators, accelerators, key thematic components, normative aspects, core function strategy, output indicators, trade-offs, and risk mitigation.

112 The current Strategic Framework links BP3 to better nutrition 3 via a footnote but it is not explicitly integrated with it nor with other PPAs, thereby missing an opportunity to promote it as a cross-cutting approach. This was justified by stakeholders consulted as being part of the trade-offs inherent in a strategy development process. Nonetheless, the signalling that emerges from "limiting" One Health to BP3 rather than making it a cross-cutting theme is an issue of concern to some internal stakeholders consulted. This was highlighted during the BP3 planning workshop in 2023, with its summary report stating: "*One aspect that was continuously emphasized by participants is the inter-divisional nature of One Health, which should address all healths in an equal and inter-linked manner, including human, environmental, animal, plant, forestry, and fishery health*" (FAO, 2023e).

113 The BP3 results framework is intended to be mainly used to organize and monitor One Health progress of FAO at the macro-level, ensuring coherence in support provided to Members in achieving the SDGs. It does not provide specific guidance for (M&E at the project level. Interviews with FAO senior personnel involved in the development of the new framework confirmed that it is the responsibility of project leads to align project objectives, design and project-level M&E framework with the new strategy.

114 Interviews with FAO senior personnel involved in the development of strategic frameworks and in the leadership of One Health projects reported that results framework at the macro and at the project levels have also been influenced by Tripartite/Quadripartite strategic-level documentation related to One Health, zoonosis and AMR. These include:

i. The One Health Joint Plan of Action 2022–2026 (FAO, UNEP, WHO and WHOA, 2022).
ii. The One Health theory of change (OHHLEP, 2022).
iii. The guide to implementing the One Health Joint Plan of Action at national level (FAO, UNEP, WHO and WHOA, 2023).
iv. The Tripartite Zoonoses Guide (FAO, WHO and WHOA, 2019).
v. The Multisectoral Coordination mechanism Operational (WHO, FAO and WOAH. 2022).
vi. The Surveillance and Information Sharing tool (WHO and FAO, 2022).
vii. For AMR projects: the Global Action plan on AMR (WHO, 2016).

115 Most of these strategic documents are recent, and several were developed in parallel or after the development of the current FAO Strategic Results Framework, which shows that the development of the One Health approach is very dynamic at the present time, both at FAO and globally. This also explains why there is as yet no harmonized joint evaluation framework for One Health within FAO and with other international organizations. This is a rapidly evolving field, and work still needs to be done to specify the best M&E practices at the global, institutional and national levels. For One Health projects related to AMR, the FAO Action plan on AMR that was released in 2021(FAO, 2021b) has also been a key strategic document to support both high level and project level M&E.

116 New M&E guidelines have been developed for projects conducted in the context of the Pandemic Fund, which may impact the result measurement system for One Health-projects at FAO in the future, although this framework is very new (*The Pandemic Fund Monitoring and Evaluation Guidelines*, 2024b) (draft version accepted in February 2024). The proposed results framework includes 16 indicators (Appendix 3, Box 2): "*along four key dimensions: a) Building capacity/demonstrating capability; b) fostering coordination nationally (across sectors within countries), and among countries regionally and globally; c) incentivizing additional investments in pandemic PPR; and d) ensuring administrative/operational efficiency of Pandemic Fund resources, as well as cross-cutting areas, such as gender and equity*". Indicators are derived from existing evaluation tools such as the Joint External Evaluation (JEE), the IHR States Parties Self-Assessment Annual Report (SPAR), and the Performance of Veterinary Services (PVS). Complementary project-specific indicators can also be included. The proposed Pandemic Fund evaluation framework is conceptually aligned with the measurement system FAO has been using (i.e. based on a result chain, including outcomes and outputs). The Pandemic Fund evaluation guidance document states that: "*Indicators should be formulated either a) as outputs ("Number of surveillance sites with staff trained in national antimicrobial resistance surveillance standards and guidelines in line with the Global Antimicrobial Resistance and Use Surveillance System [GLASS] manual") or outcomes ("Percentage of surveillance sites applying national antimicrobial resistance surveillance standards and guidelines in line with the GLASS manual") that can be measured quantitatively, or b) as milestones or deliverables. Process and input indicators should be avoided where there are relevant alternatives that measure intermediate results*". This Results Framework has the advantage of providing a harmonized framework for all projects to be financed by the Fund, whether by FAO or other organizations (WHO, WHOA, UNEP, others). However, the nature of this approach remains limited for assessing progress in implementing all the dimensions of the One Health approach, as described in Finding 12.

117 Interviews also revealed that some FAO country teams have led the development of a new tool to support One Health operationalization – the One Health Monitoring Tool,[16] which has been piloted in a few countries (FAO, 2021c). The purpose of this tool is to assess progress made on One Health implementation at local, national and regional levels, and could provide useful inputs in the development of an harmonized One Health measurement system for FAO.

Finding 14. Until now, there is no indicator specific to the strengthening of One Health systems in the BP3 results framework, although this element is clearly identified as an expected outcome of BP3. The evaluation also found there are tools in use that can be considered a step in the right direction.

118 Within the new strategic framework, BP3 is linked to three SDGs (1, 3 and 15) (Appendix 3, Box 3); and two output indicators for BP3 are listed: i) Number of CPFs/countries where FAO has supported SDG targets to achieve strengthened and better performing national and international integrated One Health systems for human, animal, plant and environmental health through improved pest and disease prevention, early warning and management of national and global health risks, including AMR; and ii) Stakeholders' appreciation of FAO's work; relevance, innovative nature, partnerships, normative contribution, leveraging resources for impact. The second indicator relies on a stakeholder's survey, which includes specific questions for each PPA.

119 The expected BP3 outcome is: "Strengthened and better performing national and international integrated One Health systems for human, animal, plant and environmental health achieved through improved pest and disease prevention, early warning and management of national and global health risks, including AMR")", and six core functions are defined (Appendix 3, Box 4). The Evaluation Team considers that certain elements of the outcome are not captured by the current SDG indicators corresponding to BP3, namely the inclusion of specific result indicators for AMR and for One Health systems. This issue was corroborated during interviews. It was confirmed that

[16] Now called the One Health Assessment Tool

a specific result indicator for AMR has been proposed and is currently being integrated in the updated version of the BP3 results framework. The development of an additional indicator for One Health system is under discussion.

120 Interviews with the Lead Technical Officers of One Health-projects implemented during the period under review revealed that harmonized guidance for monitoring One Health-related results at project level is still lacking in the context of the new strategy, and that the measurement of One Health-related results was a challenge for them. Interviewee insights gathered by the evaluation suggests three main factors that could explain this. First, there is still a lack of consensus on how to measure progress and results related to the implementation of One Health for FAO projects. Second, interviewees repeatedly mentioned that limited resources allocated to M&E at project level was a barrier for conducting comprehensive evaluations of their results. Third, some interviewees mentioned the lack of availability of data to effectively measure some dimensions of One Health (e.g. improved timeliness of outbreak reporting at the country level; allocation of resources among sectors).

121 The lack of resources and availability of data were also reported in the 2023 FAO One Health PPA Workshop Report (FAO, 2023a). The report underlined the importance of M&E, the challenges posed by barriers to reporting and the difficulties related to measuring the long-term and economic impact of One Health (Appendix 3, Box 5).

122 FAO senior personnel involved in the development of the Strategic Results Framework at macro-level were aware of these challenges although they reported that the current Strategic Results Framework, which details expected outcomes and SDGs target for BP3, should be used by project leads to align project's design (including projects specific results frameworks) with the higher-level theory of change.

123 Interviews with some project leads showed that one major One Health programme implemented by FAO (GHSA) has developed more detailed data collection tools which allow harmonized data collection and reporting across projects conducted under the programme. These tools, developed in Excel, provide instructions and definitions with regards to each output indicator, which are more detailed than what is provided in the template project document and logframe. The Evaluation Team noted that these tools allow for some analysis on FAO contribution (Appendix 3, Box 6, elements in column B) in addition to the assessment of activity completion (column A). The use of such a data collection tool across projects within the programme also allows stakeholders involved in data collection to use harmonized definition and methods to monitor indicators, which then facilitate a thorough understanding of One Health progress at the global level (Appendix 3, Box 6). Although they do not allow for in-depth analysis of certain important dimensions for One Health, as described in Finding 12, they do represent notable progress in terms of harmonizing data collection tools, and in the inclusion of a certain analytical dimension. They are also a good starting point and could be shared for use in other One Health projects.

Finding 15. The FAO Action Plan on AMR 2021–2025 is explicit about the importance of applying the One Health approach to address AMR in FAO projects, although the inclusion of One Health result indicators in its Results Framework is limited, which highlights that the challenge of mainstreaming One Health thinking is still present in FAO. Nonetheless, projects that focused on One Health operationalization at national levels or on AMR mitigation seem to integrate more intersectoral result indicators in comparison to projects that focus on specific diseases or sectors, such as the strengthening of veterinary services.

124 Document analysis showed that there is a harmonized measurement system for AMR projects at FAO that was developed as part of the FAO Action Plan on AMR 2021–2025 (FAO, 2021b). The action plan is explicit about the intention of FAO to apply a One Health approach to its actions toward antimicrobial resistance, as stated in the first paragraph of the Executive summary (FAO, 2021b, p.vii): "*FAO Conferences in 2015 and 2019 underscored the importance and urgency of addressing*

the growing global threat of antimicrobial resistance (AMR) in all countries through a coordinated, multisectoral, One Health approach in the context of the 2030 Agenda for Sustainable Development". The document describes the types of action that FAO should support, in line with a result chain that details inputs, activities, outputs and outcomes that are expected. It also provides clear guidance on M&E, especially to guide the choice of output indicators that should be monitored at project level (pp.28-30).

125 One output indicator refers explicitly to One Health out of a total of 30 output indicators. It is included in Outcome 5 "*Strengthened governance and resource allocation to minimize and contain AMR sustainably in food and agriculture*". Output 5.3 is "*Partnerships and multisectoral collaborations are implemented and supported"* and is measured by output indicator 5.3.i.1: "*Number of initiatives (e.g. networks, regional frameworks, Tripartite collaboration initiatives) supported by FAO to strengthen national, regional, and global One Health collaboration in relation to AMR*".

126 There is no definition of One Health collaboration at these levels, nor details about what levels and types of collaboration should be expected, which can be a challenge for project design and evaluation. It is also interesting to note that One Health is not explicitly used as an approach for other expected outcome where it could have been expected, for example under Outcome 2 "*Strengthened evidence through multisectoral surveillance and research on AMR, AMU and antimicrobial residues*", where a multisectoral approach is clearly stated but without indicators to measure it. This may reflect the challenges that persist over exactly what a coherent multisectoral approach with One Health should be and how it should be done within FAO.

127 Some interviewees involved in the leadership of AMR projects at FAO confirmed that the FAO Action Plan on AMR is directly guiding the choice of results indicators for projects implemented in this sector. When looking at outcome and output indicators of One Health projects related to AMR implemented in 2021–2023, the Evaluation Team found a moderate level of alignment with these indicators, although the formulation varied across projects.

128 An analysis of project information available in the FPMIS database revealed that the number of One Health projects that focused on different topics evolved over time, with more projects related to AMR or to the global strengthening of One Health systems at national levels being implemented more recently (2020–2021) (Appendix 3, Box 1, Table 1). The analysis of the additional 20 selected One Health projects implemented in 2022 and 2023 supports this trend, although the complete list of One Health projects from that period was not reviewed. The content analysis of the result indicators used across different project types suggest a trend in using more indicators related to intersectoral collaboration in One Health projects that focus on AMR or on the operationalization of the One Health approach in the management systems (One Health system), when compared to projects with a focus on veterinary services, food safety or on a particular disease threat. This is illustrated in Appendix 3, Table 2 with selected indicators extracted from projects conducted across different project types. Likewise, the type of One Health-related indicators is mostly driven by the topic of the project (AMR, food safety, disease preparedness and response, One Health systems), and does not vary significantly between regions of implementation.

129 In general, indicators addressing at least one of the One Health dimensions are present in the majority of the projects analysed as described in Appendix 3, Box 1.

Finding 16. Highlights of FAO's contributions to One Health during the period 2010–2023 include supporting countries to structure and support the implementation of intersectoral collaboration and coordination for zoonotic diseases, AMR and food safety. Nonetheless, the lack of consensus on the definition of and on expected results from One Health at FAO, combined with the lack of harmonization of the result measurement system for One Health in the period 2010–2019 limits the capacity to systematically assess One Health-related results reported under the previous strategy. This limitation will be addressed in the future thanks to the inclusion of One Health in the new Strategic Framework.

130 The analysis of One Health project included in this evaluation (Appendix 3, Box 1) suggests that projects conducted in coherence with One Health were mainly centred around three domains between 2010 and 2021: zoonoses, AMR and food safety. An increasing number of projects also adopted a wider approach dedicated to the strengthening of One Health operationalization, through supports provided in developing collaboration and coordination mechanism across sectors and in supporting the development of capacities to enhance response to health threats, through mainly supporting the animal health sector as exemplified by the work of ECTAD. Interviews confirmed these observations, with several interviewees mentioning that One Health work at FAO has been mostly mobilized by the Animal Production and Health Division.

131 In addition to the contributions reported in the first section of this report, as well as those identified in the sections below on partner perceptions of FAO and on cross-cutting themes, other highlights are worth mentioning. ECTAD's work in building animal health capacity to prevent, detect and respond to disease threats through the Emerging Pandemic Threats 2 and the Global Health Security Agenda programmes are of note.

132 The evaluation of Emerging Pandemic Threats Programme - Phase II (EPT-2) in 2020 found that "The overarching One Health approach applied across EPT-2 has supported countries in organizing multisectoral collaboration and technical resources against public health threats at the human–animal–environment interface. This has prompted countries, particularly in Africa, to augment their public and animal health systems by pooling both technical and material resources for the early detection, prevention, and control of zoonotic diseases".

133 At the global level, in the context of the Quadripartite, the contribution of FAO to One Health, and limits related to its successful implementation in FAO activities to date have been recognized. Taking AMR as an example, an evaluation of FAO's role and work on AMR between 2015 and 2020, conducted by the Office of Evaluation, highlights One Health-related results of interest. FAO contribution to One Health is clearly reported, although the report states that it is still early to really capture the effectiveness of FAO support to One Health in this field: "*FAO, along with OIE and WHO, has played a major role in developing and implementing AMR NAPs, helping to set in motion or strengthen work on AMR at national level. However, overall NAP implementation and multisectoral collaboration on AMR remain a challenge. FAO has, therefore, developed useful tools and supported national One Health coordination units. There has been an increase in multisectoral coordination on AMR, but the tools are recent introductions and it is too early to assess their effectiveness*" (FAO, 2021a).

134 The report also underlines the contribution of FAO to strengthening AMR surveillance systems, although that evaluation noted that most activities focused on the animal health sectors rather than on integrated One Health surveillance systems: "*FAO has developed and successfully rolled out its tool for assessing in-country AMR surveillance capacity and, where funding has allowed, worked to improve national capacity. Active AMR surveillance remains a challenge, however: in most countries, FAO's work is not generating the quality data needed to build evidence. Also, while some pilot surveillance projects have been implemented across the One Health spectrum, including in fisheries, environment, and food safety, most are focused on livestock and poultry. Scaling up support for a comprehensive One Health approach to surveillance systems that produce quality data on AMR at national level is an urgent challenge for FAO*".

135 The AMR example also illustrates well the challenges cited in the previous sections of this report, as it concludes that: "FAO has not been able to develop a complete One Health approach to AMR, despite promoting it [...]. It has been applied to projects with varying levels of success. While the livestock, aquaculture, and food safety teams are significantly involved in AMR, the various plant, forestry, soil, and water teams have had limited involvement. While this is understandable in view of the significant knowledge gaps in these fields, FAO, as part of the global AMR infrastructure, is committed to a holistic One Health vision and should take greater leadership in these areas".

3.4 Perception of FAO's work in One Health by Quadripartite partners

Finding 17. FAO's areas of work within the Tri/Quadripartite have been diverse, thematically spanning all six action tracks of the One Health Joint Plan of Action. FAO is recognized by Quadripartite partners as an important contributor to knowledge production and sharing for implementing One Health.

136 The set of projects explicitly referring to One Health in their title before 2021 suggests that the predominant FAO contribution to One Health was centred on animal health and zoonotic control, which is in line with the findings on the evolution of One Health in the Organization. Likewise, the report of the FAO Corporate One Health Workshop, held in May 2011, confirms FAO's work as being focused on emerging zoonotic diseases, with some minor references to plant health and food safety, and no mention of AMR at all.

137 The same report refers to the then recent (2010) Tripartite collaboration as being focused on "normative work, public communication, pathogen detection, risk assessment and management, technical capacity building, and research & development". Interviews with external stakeholders familiar with FAO's work during that period perceived FAO as having made valuable contributions to the Tripartite's areas of work back then as well.

138 The six action tracks of the Quardripartite's One Health Joint Plan of Action provide a useful reference framework to categorize projects from the One Health portfolio as indicated under Finding 10. Far from entailing an anachronistic and unfair evaluative framework, the categorization reveals that those projects may be ascribed to all six action tracks. This suggests the wide relevance of FAO interventions across the spectrum currently considered for One Health actions, although with a highly skewed distribution between areas as mentioned earlier.

139 Around 5 percent of the budget was allocated to projects that could not be clearly ascribed to a One Health Joint Plan of Action action track in particular (e.g. food security in the face of the COVID-19 pandemic, non-zoonotic animal diseases). This suggests that FAO is also providing a nuanced perspective on One Health that may influence the future evolution of the concept.

140 Currently, the Quadripartite has four priorities, that may also be considered as One Health areas of action: i) facilitating the implementation of the One Health Joint Plan of Action at the country level; ii) the knowledge nexus, producing evidence and establishing communities of practice; iii) advocacy at the international level; and iv) joint resource mobilization. FAO is described by Quadripartite members and partners that were consulted as being involved significantly in all four priorities, with a perceived deeper commitment to the first two priorities. Quadripartite partners also highlighted the role of FAO in knowledge production in the recent work on the "Return on Investment of One Health". The fourth priority, joint resource mobilization is, however, described as requiring increased efforts from all Quadripartite partners.

141 Quadripartite partners mentioned, in general, the normative, policy-advising and capacity-building work of FAO as major contributions to One Health implementation. Quadripartite partners perceive the co-creation and sharing of knowledge as important contribution of FAO. For example, the writing and publishing of guides, tools and strategic documents, (e.g. the tripartite zoonosis guide) is reported by the Quadripartite partners consulted as an important contribution of FAO. The work conducted under the Virtual Learning Centre (VLC) and on the Return on Investment publication were consistently cited as valued initiatives of FAO. The key role of FAO in the development of the One Health Joint Plan of Action was highlighted by all Quadripartite partners interviewed as being yet another important contribution.

Finding 18. FAO's technical work on animal health, particularly that of ECTAD is perceived by partners and FAO personnel as significant. The central place it holds in the perception of FAO's contribution to One Health tends to overshadow other valuable ones such as normative work on AMR, food safety and projects such as the Sustainable Wildlife Management (SWM).

142 ECTAD is perceived by partners as a leading figure in FAO's work on One Health. As it originated from the zoonotic crisis due to highly pathogenic avian influenza, ECTAD is now widely perceived as an important advocate of One Health in practice, adopting the approach in its field interventions.

143 The evaluation of EPT-2 referenced earlier concluded that the programme's "[…] technical focus has strengthened traditional partnerships between FAO and technical livestock departments and ministries and built stronger collaborations with health and environment ministries. Regional partnerships have strengthened in Asia and ECTAD has both called on and assisted the FAO/OIE/WHO Tripartite Alliance to support many aspects of EPT-2 work. EPT-2's partnerships with the private sector and civil society organizations were more superficial". The evaluation then went on to recommend that "FAO needs to fully utilize its convening power, partnerships, trusted status and experience of emerging pandemic threats to engage political and business leaders on the need to consolidate and scale up EPT-2-induced gains to improve pandemic preparedness".

144 Although it appears less central in partners' narratives compared to zoonosis, work in AMR is consistently cited by FAO personnel as an important contribution of FAO to One Health. As detailed in the section on the evolution of One Health in FAO, antimicrobial resistance grew in importance over time and in terms of the share of the One Health project portfolio.

145 FAO's work on One Health food safety is also a topic that has yet to gain the level of attention achieved by animal health despite inroads made. Similarly, the Sustainable Wildlife Management project, a recent (2023) initiative that incorporates One Health in its approach, is mentioned as relevant but not perceived as central to FAO activities in One Health by partners yet. The inclusion of soil and water in the One Health approach of FAO was consistently mentioned as an emerging area of progress.

Finding 19. FAO's role and leadership on One Health is recognized within the Quadripartite. The absence of a formal mechanism to distribute tasks among Quadripartite partners, combined with thematic overlaps between them, can lead to operational tensions at the regional level, and to a lack of clarity on the roles of the different organizations for funding partners and countries.

146 Quadripartite stakeholders interviewed recognize FAO's track record in One Health and the leadership it has displayed within the partnership. The role played by FAO at different levels (e.g. regional, country) as a convener is appreciated by its partners. That role contributes to a perception of FAO as a strong leader on One Health by implementation and resource partners. The role played by FAO in the drafting of the One Health Joint Plan of Action was consistently pointed out by all Quadripartite partners interviewed as a positive example of that leadership. They also stated that FAO's ability to mobilize resources was recognition of its track record in One Health. Nonetheless, some expressed that at times, FAO had been slow in involving them in the design of the projects or initiatives, thereby undermining buy-in of partners, and leading to a perception that FAO was imposing activities on them.

147 Quadripartite partners interviewed did not report formal mechanisms for coordination and decision-making on the distribution of roles and responsibilities in terms of sectors (e.g. human, animal, plant and environmental health) or topic (e.g. zoonosis, antimicrobial resistance, food safety, biodiversity conservation). The delineation of their respective roles is deemed clear by the Quadripartite partners since these stem from their respective mandates, although thematic overlaps are recognized. The distribution of tasks and responsibilities appear to be taken by each partner based on their mandates, their respective involvements in various partnerships and initiatives, institutional initiatives and their perceived comparative advantage.

148 An overlap with FAO is recognized between mandates in terms of sector served: namely with UNEP on environment and with WOAH on animal health. However, FAO personnel and Quadripartite partners describe that confusions are avoided thanks to the distinct levels and types of action of the different partners on each of these sectors. This overlap is then presented as "commonalities", that are

perceived as allowing for fruitful complementarity. Nevertheless, the overlap in terms of sector served has also been a cause of confusion for external actors (for example resource partners or countries), and at times, a source of tension between Quadripartite partners in some regions. Implementing partners interviewed mentioned a need for vigilance to avoid crossing into other partners' mandates. An additional overlap is also reported in the Latin America and Caribbean region, between FAO and the veterinary section of the Pan-American Health Organization (called the Pan-American Foot-and-Mouth Disease Center). There is an absence of a regional Quadripartite coordination mechanism in this region.

Finding 20. FAO depicts its One Health comparative advantages as lying mainly in its multidisciplinary, multisectoral capabilities and operational and analytical capacities at the country level. Partners consulted mostly stress FAO's technical capacities and presence at the country level as the standout comparative advantages.

149 FAO's work in One Health during the period under review can be framed in practice in an emergency-resilience framework, such as ECTAD effort under SO5 during the previous Strategic Framework. The SO5 evaluation conducted in 2016 highlighted as a comparative advantage the fact that FAO was *"ideally positioned to contribute to the resilience agenda, due to the following external and internal advantages: a growing need for resilience support; a current reassessment of the humanitarian-development divide; FAO's extensive experience in livelihood support, early warning and disaster risk reduction and mitigation; and the coherence of the resilience agenda with the FAO mandate"*. Yet, in the sections of the One Health projects devoted to comparative advantage neither the work of FAO on resilience, nor the articulation between humanitarian and developmental work stood out.

150 The "*reassessment of the humanitarian-development divide"*, that was pointed out in the SO5 evaluation as an opportunity and strength for FAO, is relevant for One Health implementation. Indeed, One Health is currently framed around *"Preparedness, Prevention and Response"*, especially in the context of the Pandemic Fund. This is an opportunity to reflect on how "response", or emergency management, is an extension of work on prevention (i.e. development work), and vice versa. Therefore, the idea of a comparative advantage of FAO on the continuum between emergency and developmental work is an important consideration for its positioning on One Health.

151 The analysis of sections devoted to FAO's comparative advantages in the projects belonging to the One Health portfolio found that FAO presents itself as a multidisciplinary and multisectoral organization, with a wide range of expertise in a variety of disciplines, and operational capacities at the country level. Those project document sections also mention the role of FAO in convening, and when required, coordinating the efforts of international partners, United Nations agencies and national counterparts in assisting countries, as well as its relations with a variety of stakeholder organizations, including the food and livestock industries, professional associations and civil society. Additional comparative advantages mentioned are the role and experience of FAO in normative and standard-setting work, as well as in the formulation methods and tools for assessment in support of countries' normative efforts.

152 The reference to multidisciplinarity and multisectorality is essential in the context of One Health, as these dimensions hold a key role in the definition of the approach that was established by the One health High-Level Expert Panel in 2022. The origins of this comparative advantage can be traced to the cross-disciplinary exercise on FAO's contribution to One Health conducted in 2010, which involved the different divisions of FAO. This effort highlighted the "federating" potential of One Health for FAO expertise, rather than merely its cross-cutting nature. In 2012, the interdepartmental working group on One Health identified as an urgent task within the Tripartite for FAO to "contribute to environmental health", showing its active role in promoting multidisciplinarity and multisectorality. However, according to FAO personnel interviews and data from the One Health project portfolio, aspiration was not followed by an adoption of the One Health approach across divisions other than the Animal Production and Health Division and Office of Emergencies and Resilience.

153 Partner interviews mainly stress FAO's comparative advantages in One Health as lying in its operational and analytical capacities at the regional and country levels, as well as its convener role. The technical strengths that FAO brings play an important role in the operational capacities as described by implementing partners, with explicit reference to ECTAD and animal health. A particular expertise mentioned by both Quadripartite partners and resource partners was the ability to conduct situation and need analysis at the country level.

154 Country-level presence was also seen as a differentiating advantage of FAO compared to WOAH and UNEP – two Quadripartite partners that have some overlap with FAO in terms of sector served. WOAH and UNEP stakeholders interviewed mentioned having access to FAO expertise to implement their interventions was valuable.

155 In FAO personnel's views, the presence of FAO at the country level provides several comparative advantages beyond technical capacities. Its anchoring in national ministries positions allows it to play a role in the policymaking process, as well as in capacity-building and giving technical support and pursuing funding opportunities. Country level presence was also seen as a gateway to providing field-level support, such as that carried out by ECTAD.

156 The FAO Regional Offices mentioned that the quality of partnerships in countries is highly appreciated by the national stakeholders. The strength of those relationships and significance varies between countries and regions but are consistently reported as fruitful. However, the degree of perceived understanding and priority of One Health for the countries is reported to vary greatly, from high priority to none whatsoever; the latter being ascribed to a lack of alignment between One Health with the actual needs and capacities of the given country.

157 On the other hand, some external stakeholders mentioned that FAO's administrative processes were cumbersome, reducing its ability to respond in a timely manner, for example the procurement of goods, but also limits the quality of mutual communication with Offices in regions or countries. This was also acknowledged by internal stakeholders consulted.

Finding 21. The overall positioning of FAO in the One Health landscape is also a product of a broader engagement beyond the Quadripartite.

158 FAO is engaged in various partnerships and collaborations on One Health beyond the Quadripartite. Some of these involve individual Quadripartite partners but do not necessarily entail direct connections or coordination with the Quadripartite secretariat.

159 The Joint FAO/WHO Centre is an umbrella collaborative initiative that addresses several issues such as food safety and zoonotic diseases within the context of both organization's mandates. The Joint FAO/WHO Centre for Food Standards (CJWC) is where the Secretariat of the Codex Alimentarius Commission is based, while the Joint Centre for Zoonotic Diseases and AMR (CJWZ) spearheads FAO's work on One Health. Although this joint centre involves two of the four Quadripartite members, its work is not embedded in the Quadripartite and is conducted in parallel.

160 The Global Framework for the Progressive Control of Transboundary Animal Diseases is an initiative established by FAO and WOAH in 2004 to combat TADs. GF-TADs fosters alliances of key stakeholders at the regional level, promotes capacity building and the control of regionally prioritized TADs.

161 In 2021, FAO and the International Atomic Energy Agency agreed to expand the scope of the Joint FAO/IAEA Centre of Nuclear Techniques in Food and Agriculture to include early, rapid diagnoses and control of transboundary animal and zoonotic diseases. This was done as a means to promote synergies with the IAEA's Zoonotic Disease Integrated Action (ZODIAC) initiative to strengthen laboratory capacities across the world.

162 The Collaborative Partnership on Sustainable Wildlife Management (CPW) provides a platform for addressing wildlife management issues, which are directly relevant for emerging zoonotic threats. The

CPW secretariat is hosted by FAO and links it to UNEP, WOAH and ten other international partners, including the Secretariat of the Convention on Biological Diversity (CBD), the Centre for International Forestry Research (CIFOR), and the International Union for Conservation of Nature (IUCN). The CPW's workplan includes embedding One Health in the sustainable wildlife management agenda.

163 Since 2017, FAO contributes, as a technical partner, to the Sustainable Wildlife Management programme, a European Union-funded initiative of the Organisation of African, Caribbean and Pacific States (OACPS). The Sustainable Wildlife Management is a consortium of three other partners: Wildlife Conservation Society, the French Agricultural Research Centre for International Development (CIRAD), and the Centre for International Forestry Research. The SWM Programme aims at addressing wild meat and food security issues with a One Health approach. Currently implemented in 15 OACPS countries, the SWM Programme was expanded to Asia in 2023.

164 The CPW and SWM were not mentioned by Quadripartite partners during the interviews in their account of FAO's contributions in the One Health arena and were even mentioned inconsistently and imprecisely by some interviewed FAO personnel, suggesting a lack of familiarity and even recognition of those efforts in FAO's positioning within the One Health landscape.

Finding 22. FAO has proven able to maintain long-term funding partnerships albeit with a limited number of donors, building on the Organization's track record in One Health as a source of technical expertise and operational capacity. Nonetheless, dependence on a few donors is a risk. Country-level funding opportunities are emerging, however there are challenges to accessing those resources. At country level, there are many examples of successful partnerships that leverage FAO's comparative advantages.

165 The United States of America leads as the primary donor for One Health projects, accounting for 74 percent of the total funding in that portfolio, followed by the United Kingdom of Great Britain and Northern Ireland (8 percent), the World Bank (7 percent), and the European Union (4 percent) (see Table 5). FAO provides 1 percent of One Health portfolio funds yet covers 12 percent of the projects.

Table 6 The six largest donors of the One Health project portfolio

Donor	Percentage of total One Health portfolio funds	Number of One Health projects funded	Percentage of One Health projects 10
United States of America	74%	63	56%
United Kingdom of Great Britain and Northern Ireland	8%	4	4%
World Bank	7%	3	3%
European Union	4%	2	2%
UNDP Administered Donor Joint Trust Fund	2%	14	13%
FAO	1%	13	12%

Source: Elaborated by the Evaluation Team.

166 Resource partners and internal stakeholders interviewed acknowledge that FAO has been able to build trust with resource partners due to its track record in delivering results combined with reporting processes (e.g. ECTAD). The importance of continual progress reporting to the resource partners, both technical and financial, was consistently cited by FAO personnel as a key factor for nurturing

the quality of those relationships. Nonetheless, the dependency on a limited number of donors is a significant risk, particularly for those country programmes whose majority share of One Health funds depends on one donor. The FAO vision on One Health, as conveyed by the One Health Programme Priority Area (BP3), appears more limited in scope compared to that of other resource partners and suggests that there is room to expand the scope of One Health collaboration.

167 The Quadripartite has identified the joint mobilization of resources as one of its four priorities. Yet in the space of One Health funding, that is described as increasingly competitive, stakeholders interviewed acknowledged cases of uncoordinated fundraising by Quadripartite that were seen by resource partners as counterproductive and unsustainable. Those stakeholders considered that there is significant room for improvement for all four partners to collaborate on this topic.

168 The capacities of some country governments to mobilize resources was also mentioned as needing to be strengthened. The time pressure to put proposals together was mentioned as a particular challenge. In parallel, the capacity-building and knowledge-sharing role of FAO as well as its strength in situation and need analysis in countries has been presented as of value. These two elements suggest a potential avenue for FAO to pursue resource mobilization through support to countries' applications to international multipartner funds. This avenue was explicitly suggested by FAO personnel at the regional level and by funding partners with significant experience with FAO.

3.5 Cross-cutting theme: Social inclusion

Finding 23. From 2010–2023, FAO developed numerous strategic documents and guidelines concerning social inclusion. These efforts culminated in the integration of gender, youth and inclusion as cross-cutting themes in the Strategic Framework 2022–2030. However, FAO lacks benchmarks and tools to address gender, youth and inclusion within a One Health approach in a systematic manner.

169 The FAO Strategic Framework 2022–2031 highlights three cross-cutting issues across all the Programme Priority Areas. These include gender, youth and inclusion (for reduced inequalities and leave no one behind principles). While gender[17] was a cross-cutting issue in the previous Strategic Framework, the current Strategic Framework also incorporates youth and inclusion. These cross-cutting issues are coordinated by the Rural Transformation and Gender Equality Division. Each of the PPAs includes targeted approaches and actions for the cross-cutting themes. Table 6 highlights actions identified by the One Health PPA (FAO Strategic Framework 2022–2031) (FAO, 2021e):

Table 7 Cross-cutting themes for BP3 One Health

Gender. The PPA will apply gender-transformative approaches and gender-responsive technical innovations, will address gender gaps in access to innovation and digital solutions, and ensure collection and analysis of gender-disaggregated data in global health systems to facilitate analysis of gender-related impacts.
Youth. Engagement can act as a critical accelerator for the uptake of digital tools and messages for biosecurity and for reinforcing and promoting behaviour changes to reduce AMR; the targeted youth engagement strategy will address this; the strong interest of youth in the UN Decade on Ecosystem Restoration and in One Health gives opportunity for a common approach to building engagements.
Inclusion. The PPA will employ an intersectional focus to engage different stakeholder groups towards inclusive initiatives across all intervention levels.

Source: FAO. *2022 PPA Information package.* Rome. Internal document.

[17] Gender, climate change, governance and nutrition were all cross-cutting themes in the Reviewed Strategic Framework.

170 The evaluation analysed guidance produced by FAO related to various dimensions[18] of One Health on gender, youth, inclusion and Indigenous Peoples to determine if they could be applied effectively for benchmarking and implementing these cross-cutting themes systematically as envisioned by the One Health PPA (refer to Table 6).

171 One of the primary challenges in integrating social inclusion considerations into One Health programmes and initiatives stems from the vast scope and complexity of One Health. As the definition of One Health includes multiple health domains (animal, human, plant and environment), each health domain encompasses issues pertinent to gender and inclusion, and further complexities arise when considering the intersections between these domains. While gender considerations hold relevance within each individual health domain, a One Health framework emphasizes gender considerations that are significant at the interfaces between at least two or all three health domains. Such considerations can illuminate how gender-based disparities compound across these domains. For instance, women or economically disadvantaged individuals may face limited access to land, exposing them to environments with heightened risks of zoonotic diseases and increasing their susceptibility to infection. If their livestock contract a zoonotic disease, these groups may lack access to animal healthcare services, negatively impacting livestock productivity. Consequently, the loss of income from their livestock assets may hinder their ability to access medical care, exacerbating the adverse effects of their initial exposure to risky environments – contrasted with individuals better equipped to mitigate risks by accessing necessary resources and services (Galiè *et al.*, 2024).

172 Between 2010 and 2023, FAO produced strategic documents and important guidance to integrate gender into programmes and initiatives. The evaluation examined 15 FAO documents that provide guidance on gender and at least one of the One Health areas (animal, human and environment). However, they lack a One Health approach as none of them integrate gender considerations that are at the interfaces between at least two or more of these areas.

173 Most recently, in 2023 FAO, in collaboration with the International Livestock Research Institute (ILRI), the International Fund for Agricultural Development (IFAD) and the World Bank launched the Framework for Gender Responsive Livestock Development (FAO, ILRI, IFAD and the World Bank, 2023), which serves as an overarching framework to support the planning and implementation of gender-responsive policies, projects and investments related to the development of the livestock sector. The document underscores that One Health has paid limited attention to gender issues (even though men and women are exposed in different ways to food safety or zoonotic disease risks within the household or within livestock value chains) and encourages that future efforts conduct gender-related diagnostic and exploratory work in areas such as One Health (FAO, ILRI, IFAD and the World Bank, 2023).

174 An example of a framework that uses a One Health lens for gender mainstreaming is the World Bank's Gender in Infectious Disease Epidemic Preparedness and Response (GENPAR) toolkit. The GENPAR offers benchmarks and tools for integrating gender considerations into infectious disease epidemic prevention, preparedness and response efforts. Among its modules, the toolkit's section on animal health provides guidance on developing a Gender Action Plan specifically tailored for this sector within a One Health framework. This module illustrates examples of integrating gender perspectives into livestock activities, as well as into the monitoring and evaluation of animal health initiatives. The module outlines three key steps for developing a gender action plan targeted at improving livestock health within the One Health approach.

175 In 2023, FAO, in collaboration with the Mediterranean Universities Union (UNIMED), organized the Global Youth Dialogue on Sustainable Livestock Transformation. The Dialogue, held at FAO headquarters in Rome concurrently with the FAO Global Conference on Sustainable Livestock Transformation, gathered 200 young people (21–35 years old) primarily from universities, alongside professionals from the livestock sector and policy specialists, ensuring inclusivity through careful participant selection. To

[18] Livestock, forestry, biodiversity, pesticide management and other related documents.

foster intersectoral collaboration, the organizers engaged the Plant Production and Protection Division and the Partnerships and UN Collaboration Division. A significant outcome of this initiative was the Youth Declaration, advocating for youth concerns and aspirations. Within the declaration, they urged FAO to sustain the dialogue by establishing a global youth network and proposed to consider the One Health approach in balance with the need for economically viable livestock production (FAO, 2023b).

176 Prior to the development of FAO's Rural Youth Action Plan (RYAP) (2021–2025), there was no institutional guidance around youth inclusion. The Rural Youth Action Plan 2021–2025 is a five-year action plan and guides the implementation, monitoring and reporting of FAO's youth-specific and youth-sensitive activities. To complement the Rural Youth Action Plan, FAO developed a Vademecum titled "Mainstreaming youth in FAO's work programme", (FAO, 2022a), which provides further guidance on why "youth" have been identified as a cross-cutting theme in FAO's Strategic Framework, who can be defined as youth, what the specific Key Performance Indicators (KPI) are, and how to better include them in FAO's activities.

177 The evaluation found limited evidence of FAO guidance documents and initiatives that are related to One Health and Indigenous Peoples. However, Indigenous communities inherently adopt a holistic approach akin to One Health recognizing health as a harmonious blend of physical, emotional, mental and spiritual well-being (Hillier *et al*., 2021). For instance, while the explicit term "One Health" may not feature in the White/Wiphala paper[19] published by FAO on Indigenous food systems, its essence resonates throughout. The paper underscores the interconnectedness of environmental, animal and human health. It notes that "*the health of the hunter depends on the health of the animals, just as the health of the animal depends on the health of the hunter. This sense of interconnection with and from nature manifests in Indigenous Peoples' description of health as a composite of physical, mental, social and spiritual health – all which are significantly touched by food and food systems*" (FAO, 2021d).

Finding 24. One Health, as a concept, inherently promotes equity, access and inclusivity. Hence, One Health projects should contribute to gender mainstreaming and equality. However, In the analysis of One Health projects, the evaluation found that out of the 59 One Health tagged projects, only 22 percent of projects included gender in their results framework, and only one project included youth. The evaluation found no evidence of the inclusion of Indigenous Peoples as beneficiaries in the One Health tagged projects. Nonetheless, there are noteworthy examples of gender mainstreaming and youth inclusion (see Finding 25).

178 The One Health High-Level Expert Panel solidified the definition of One Health, anchoring it in several core principles. Two of these are gender equality and inclusiveness and equity (FAO, UNEP, WHO and WOAH, 2022). The One Health Joint Plan of Action states that "*efforts to implement the One Health Joint Plan of Action support gender equity and women's empowerment and take a gender-sensitive perspective*" and that the "*One Health Joint Plan of Action adopts a conducive framework to enhance inclusiveness and equity in the formulation of One Health policies, legislation and practices*" (FAO, UNEP, WHO and WOAH, 2022).

179 Prior to this definition, practitioners and researchers showcased the link between One Health and gender and social inequalities. For example, Bagnol *et al*. (2015) identified a conceptual One Health (EcoHealth) framework that links the gender inequities with animal, plant and human health domains (Bagnol, Alders and McConchie, 2015). Garnier *et al*. (2020) argue that implementing integrated health approaches delivers added value and multiple outcomes in term of sustainability, health, welfare, equity and effectiveness (Garnier, 2020). The framework advocates for drawing on the knowledge of Indigenous Peoples to realign our relationship with nature and enhance biodiversity conservation. More recently, Galie *et al. (2024*) present research highlighting the importance of integrating gender and other identity markers into One Health as essential in understanding the risks at the human-animal-environment interface.

[19] The Wiphala paper, published in 2021 is the result of collective work by Indigenous Peoples' representatives and experts, scientists, researchers and UN personnel. Over 47 different units, organizations and institutions have contributed to the Paper from the seven sociocultural regions.

180 The evaluation found that One Health tagged projects are less likely to assign a gender marker than compared to the FAO universe of projects. As shown in Table 8, One Health-tagged projects have fewer instances of gender mainstreaming (G1) and gender-specific interventions (G2) compared to the overall universe of projects. Specifically, 78 percent of One Health-tagged projects have a G1 marker, whereas 87 percent of all projects in the Universe have this marker. Within the entire portfolio, very few projects have a G2 marker. Only 5 percent of projects in the universe have a G2 tag, while 4 percent of One Health-tagged projects have this designation.

181 Additionally, One Health tagged projects are more likely to not consider gender as relevant compared to the overall universe of projects. While only 9 percent of projects in the universe identify as having no gender relevance, 18 percent of One Health tagged projects identify as having no relevance to gender.

Table 8 Description of projects assigned a gender marker

Out of all the projects included in the portfolio universe (11 173), 58 percent (6 451) have a gender marker assigned to them. The following analysis only considers those projects that have a gender maker assigned to them. The table below presents a distribution of the number and proportion of projects across the two different subsets.

	Universe	One Health tagged	All
	N (% in the period)		
Total projects with gender marker	6 349	102	6451
G0 – no gender relevance	566 (9)	18 (18)	584
G1 – gender mainstreaming	5 492 (87)	80 (78)	5 572
G2 – gender specific	289 (5)	4 (4)	293

Source: Elaborated by the Evaluation Team.

182 Moreover, the evaluation conducted an in-depth analysis of 58 projects tagged as One Health[20] and found that only 22 percent (13 out of the 58) of the projects had reference to gender in the results framework, and 21 percent (12 out of the 58) described specific activities related to gender in the project.[21] Over time, there has been an increase in the inclusion of gender-sensitive and gender-mainstreaming activities. The first projects with the inclusion of gender in the Results Framework and activities started in 2020[22] compared to six projects in 2022 (given the small proportion of projects available for analysis between 2010 and 2019, these findings should be interpreted with caution).

183 This is further complemented by the findings from previous evaluations related to One Health. Out of the 17 evaluations[23] shortlisted by the Evaluation Team as relevant to One Health, 10 of them found inadequate or limited inclusion of gender in project activities (see section 1.4 on methodology). For example, in the Evaluation of the Global Framework for Transboundary Animal Diseases (FAO and WOAH, 2018) gender was not mainstreamed. Similarly, in the Evaluation of the Emergency Prevention System Programme in Food Chain Crisis, although gender mainstreaming was observed in some EMPRES initiatives, there was no consistent strategy to ensure context analysis, gender or accountability to affected populations monitoring. The Evaluation of the Emerging Pandemic Threats Programme (EPT-2) concluded that EPT-2 lacked an explicit or consistent strategy to ensure the undertaking of

20 This is part of the same sample of projects considered under evaluation question 2. The sample includes 39 projects from 2010–2021 (all projects tagged as One Health) and a further informative sample of 20 projects from 2022–2023.
21 During interviews with project Lead Technical Officers, it might be the case that some projects are conducting activities related to gender, but these are not reflected in the project document.
22 These are the projects under the GHSA umbrella.
23 This includes thematic, real-time, programme and project evaluations.

gender analysis or the integration and addressing of the interests of women and disadvantaged segments of the population (FAO and WOAH, 2018).

184 The Youth Barometer reveals that the PPA BP3 is the lowest performing in terms of youth inclusion (FAO, 2024a). The analysis assessed the youth-specific key performance indicator trends over the biennium 2022–2023, including performance of the Programme Priority Areas. It evaluated two parameters: the percentage of projects involving youth in their activities and the percentage of projects with age-disaggregated targets. Out of the BP3-tagged projects included, only 16.8 percent involved youth in their activities, and just 9 percent had age-disaggregated targets (FAO, 2024a). Interviews indicated that while there are focal points assigned to the One Health PPA, they have not participated in meetings.

185 Out of the 58 project documents reviewed by the evaluation, only 5 percent (3 out of 59) of the projects mentioned included youth in their activities. Two of these projects are on AMR and one of them is on the application of One Health to improve food systems. However, the evaluation was not able to find any reference to projects collecting data disaggregated by age.

186 In the sample of projects examined, none listed Indigenous Peoples in their activities or as beneficiaries. However, an interesting example for project formulators to consider is the Sustainable Wildlife Management Programme, which employs a gender-responsive and community rights-based One Health approach (this project was not part of the sample of 58 project tagged as One Health). This programme promotes intersectoral collaboration, particularly between forestry and wildlife sectors, to address health threats to animals, humans, plants and the environment. Engaging Indigenous Peoples and local communities is a core feature of the SWM Programme (FAO, 2023c).

187 The evaluation found few examples of inclusion for disadvantaged groups, such as people with disabilities and marginalized communities. Among the 58 One Health projects sampled, only one mentioned awareness of the needs of disabled people and conducting an analysis to ensure their inclusion (UN, 2021). Additionally, only two other projects mentioned engaging with underrepresented or marginalized groups.

Finding 25. The Evaluation Team identified good practices for mainstreaming gender and youth into FAO's One Health work such as the Virtual Learning Centre course on One Health and female leadership, the action to support implementation of Codex AMR in Pakistan, and the Bangladesh Veterinary Olympiad.

188 The Virtual Learning Centre's course on One Health and female leadership is a key initiative for gender-specific interventions. Piloted in West Africa, this course aims to address gender-specific challenges in farming communities, guide women on preventing infectious diseases and other One Health risks and improve nutritional security. It was developed through three gender analyses conducted in Nigeria, South Africa and Uganda, which identified gaps and needs among female service providers and farmers regarding access to animal health services and digital technology.

189 The course, funded by the "Improving Services to Primary Producers and Smallholder Farmers for Better Production and One Health" project and developed in partnership with the University of Florida, ran from 27 November to 17 December 2023. It included both online and in-person components, with 498 participants enrolled on the West Africa VLC platform, mostly from Nigeria. Of these, 370 participants (74.3 percent) logged into the course page, and 235 (63.5 percent) completed all modules, earning a certificate of completion. It included participants from various health sectors, such as community health workers, nurses, doctors and veterinary paraprofessionals.

190 The course was reported to have had positive outcomes, with participants applying their learning to collaborative activities with human and animal health counterparts. These activities included organizing awareness events on zoonotic diseases, establishing referral systems for gender-based violence cases and creating income generation opportunities. Additionally, the course addressed gender-based violence, emphasizing its connection to the One Health nexus and highlighting its

social and financial costs. The VLC course was also conducted in East Africa and adjusted based on the needs of the region and the lessons learned from West Africa. It ran for four weeks with the same eight modules.

191 Another example is the project on implementing Codex standards to combat foodborne antimicrobial resistance (AMR) (GCP/GLO/505/ROK), which included training female veterinary doctors in Pakistan on AMR awareness. This focus on women is crucial in Pakistan, where the majority of those involved in livestock rearing are women, making it appropriate for them to be served by female veterinarians. This initiative reportedly has helped proliferate the message among female livestock keepers on the responsible use of antimicrobials, good animal nutrition and disease prevention through vaccination, rather than using antimicrobials without a veterinary prescription

192 To enhance youth dialogue, collaboration and professional development, ECTAD partnered with the National Veterinary Dean Council (NVDC) and organized the first Bangladesh Veterinary Olympiad – a competition between universities – in 2022. Around 1 000 students begin veterinary education each year in Bangladesh, but there is minimal interaction among the veterinary schools. For the Olympiad, each veterinary school held a qualifying round, with 166 gender-balanced teams, each consisting of five members, two of which had to be female, from different academic levels. The winning team from each school advanced to the final round (FAO, 2023d). The second Olympiad saw a significant increase in participation, with 329 teams from 14 veterinary schools and a total of 1 645 students.

4. Conclusions and recommendations

4.1 Conclusions

The evolution of One Health in FAO 2010–2023

Conclusion 1. Work on the control and prevention of highly pathogenic avian influenza underpinned what became the predominant One Health approach in FAO from 2008 onwards. Through leadership in its animal health sector, over the last 15 years FAO has developed a One Health approach that has played to and enhanced its organizational strengths and capacities. At the heart of this approach is the aim of addressing One Health problems at source through the implementation of concerted, country-level biosecurity projects and plans.

Conclusion 2. One Health approaches in FAO have been historically disease-focused. This has had important implications for the evolution, orientation and understanding of One Health within the Organization. Despite general agreement that One Health is best characterized as an integrated, unifying, multidisciplinary, multisectoral approach to optimize the resilience and health of people, animals and ecosystems, this is not how it has been defined or operationalized over the last ten plus years. Instead, One Health at FAO has been largely defined and shaped by the priorities, projects and funding of the animal health sector, especially ECTAD.

Conclusion 3. The 2011–2015 One Health Action Plan built upon and expanded the animal health sector's response to HPAI. The plan prioritized risks and improvements to animal and human health as the basis for achieving broader aims of socioeconomic development and sustainable agrifood systems. It succeeded in embedding a distinctive FAO One Health approach for managing high-impact zoonotic disease risks affecting animals and humans, food security, development and livestock systems at regional and, especially, country level. The Action Plan demonstrated the vital role of ECTAD, working in collaboration with the Office of Emergencies and Resilience, in facilitating, coordinating and implementing One Health approaches at region- and country-level.

193 Some broader aspirations of the Plan did not bear fruit. There was limited cross-divisional working and limited broadening in the use of One Health at headquarters. One Health was largely delimited to animal or human environments (the farm, slaughterhouse, wet-markets, etc), from which zoonoses could spillover or emerge into human populations, with little attention to broader ecological systems or contexts.

194 A significant gap has existed between a One Health rhetoric, which emphasizes integrated approaches to human-animal-ecosystem health, and organizational realities in which human and livestock animal health have been prioritized and in which the "environment" is delimited to the spaces in which the two inhabit or interact.

Conclusion 4. FAO's response to antimicrobial resistance is a good example of how people and departments with diverse expertise, skills and knowledge can come together and find common ground and cause to tackle a multidimensional and global threat to humans, animals, agroecosystems, and agrifood systems. Programming on antimicrobial resistance has been crucial to broadening and mainstreaming One Health in FAO. The characterization of work on AMR as the flagship of FAO's approach to One Health is justified but needs to be qualified: there is still considerable work to be done in aligning the many divisions involved in AMR around a shared One Health approach. Likewise, in looking to AMR as a model One Health approach, it will be important to recognize the specific and unique characteristics of AMR as a One Health problem and to be cautious when translating organizational lessons from it in formulating approaches to other problems.

Conclusion 5. COVID-19 highlighted strengths and weaknesses of One Health approaches in FAO, its Members and partnerships. FAO recognized this early on and used its Response and Recovery Programme as a lever to strengthen and extend One Health at organizational, country and global level. Paradoxically, however, the focus on strengthening One Health in pandemic prevention seems to circumscribe or delimit

it to a traditional area of application at the very time when FAO is working to mainstream it as a cross-cutting approach in strengthening the resilience of sustainable agrifood systems.

Conclusion 6. The development and adoption of the 2021 One Health High-Level Expert Panel definition of One Health represents an important step towards addressing variations in the definition and meaning of One Health that existed in the past and for establishing greater consensus within FAO. The definition marks a significant shift from disease-focused approaches to health- and health-systems-focused approaches to One Health. However, it would be premature to assume that long-standing differences in the conceptualization and understanding of One Health, along with its operationalization, will suddenly disappear.

Conclusion 7. The addition of One Health in the FAO Strategic Framework 2022–2031 is an important development in the evolution of the approach in the Organization, representing an opportunity to foster a paradigm shift by implementing One Health in a complete sense to facilitate FAO's broader strategic aims of sustainable agrifood systems for all beyond disease-based approaches. Despite strong support for the view that One Health is fundamental to FAO's mandate, is suited to the Organization's comparative advantage, and organizational identity, challenges such as time-constraints, ongoing divisional priorities and availability of resources remain.

One Health projects' financial and human resources 2010–2023

Conclusion 8. The financial analysis of the One Health projects portfolio shows the important role the Office of Emergencies and Resilience and Animal Production and Health Division have had over time, and the corresponding technical role of EMC, Animal Production and Health Division and its EMPRES and AMR programmes in scaling One Health work through ECTAD. This explains the basis of FAO's track record in the One Health landscape, including its comparative advantages around work in resilience and emergency response. It also signals a missed opportunity due to the weak involvement of other divisions, stunting the adoption of the multidisciplinary and multisectoral efforts that are at the core of the Expert Panel definition of One Health.

Conclusion 9. The flexible but short-term approach of human resources based on consultancies hired through One Health projects deprives the Organization of the stability of personnel needed to build institutional memory, and sustain the internal collaborations across the multiple disciplines and sectors that would be needed to fully realize its potential on One Health.

Measuring One Health project results

Conclusion 10. Aggregated indicators are insufficient to capture progress in One Health in a comprehensive way by themselves. Given that One Health is a systemic, multilevel, transdisciplinary and intersectoral approach, the monitoring of results requires the use of approaches that embrace this complexity. The inclusion of a diversity of methods and indicators is needed for a more nuanced and comprehensive picture to emerge, which would better capture changes in processes, governance, and to measure the added value of One Health.

Conclusion 11. FAO is currently investing considerable effort in integrating One Health explicitly into its operations through BP3. The fact that One Health is confined to BP3 is both a strength and a weakness. The explicit inclusion of One Health as a PPA gives visibility to the approach and helps in clearly defining the expected results (and the associated SDG indicators), which is a strength. However, presenting One Health as a PPA rather than a cross-cutting approach that could be applied to other PPAs could diminish i) its use in other projects that could benefit from it; and ii) the monitoring of One Health related results from other PPAs would not capture One Health contributions.

Partner perceptions of FAO One Health work

Conclusion 12. FAO's position in the One Health landscape is perceived by partners as being mainly around animal health. This is notably due to the operational success of ECTAD, with emphasis on technical aspects of zoonotic control which tends to overshadow other contributions such as normative and applied work on AMR, plant pest and disease control, food safety, environmental pollution, and projects such as the Sustainable Wildlife Management, and the EMC project on strengthening plant health emergency management capacities. Partners value FAO contributions to the Quadripartite, including the generation of knowledge products.

Conclusion 13. Quadripartite partners recognize several comparative advantages that FAO has in One Health, including technical, analytical and operational capacities (mostly referring to ECTAD at the country level). The overlaps with its Quadripartite partners appear as thematic commonalities, allowing for synergies to emerge. The lack of a mechanism for task distribution at the Quadripartite level, however, may limit the partners' ability to leverage these complementarities. The drafting of a new action plan presents an opportunity for a stocktaking exercise, such as a joint evaluation, to be conducted and provide inputs to that process.

Conclusion 14. FAO's partnering approach (with resource and implementing partners) leverages its comparative advantages (e.g. technical expertise and operational capacity, convening role) in One Health. The recognized value and leadership of FAO by its Quadripartite partners can allow FAO to further leverage its advantages in an evolving landscape of One Health funding and implementation, particularly at the country level, where FAO holds a key advantage compared to UNEP and WOAH, along with enhanced collaboration with WHO.

Cross-cutting issues

Conclusion 15. FAO produced normative documents on gender mainstreaming, youth and social inclusion during the period under review, though none specifically addressing One Health. The addition of gender, youth and inclusion in the Strategic Framework 2022–2030 as a cross-cutting theme in all Programme Priority Areas, presents an opportunity for the development of frameworks and tools for benchmarking gender, youth and inclusion through a One Health approach.

Conclusion 16. FAO One Health projects have addressed gender, youth and social inclusion to some extent, even if they did not mention it in project documents, but they seldom monitor and report on them. Over the past ten years, while more projects increasingly incorporated gender, youth and more recently inclusion, few One Health projects have outcomes linked to these dimensions.

4.2 Recommendations

Recommendation 1. *For FAO senior managers:* Leverage the multidisciplinary and multisectoral dimensions of the Organization in its positioning on One Health, ensuring the appropriate engagement of underrepresented divisions in One Health efforts (as part of a system approach). The human resource needs should be assessed and addressed, using the One Health Workforce Competencies, to build and harmonize One Health skills to support development of long-term One Health collaborations inside FAO.

195 Senior management, the management team for the One Health PPA, and other internal stakeholders, will need to continue to cultivate a common and shared understanding of One Health within FAO based on the Expert Panel definition and FAO's track record in One Health as part of the process of rolling out FAO's vision for One Health under BP3 in the Strategic Framework.

196 It is important and necessary to recognize that One Health, as currently defined, requires a general cognitive and organizational shift in perceptions of and approaches to One Health. This will likely be a lengthy process that senior management across technical divisions, in coordination with the partnerships and outreach stream, can support and foster through a combination of communication activities, working groups, targeted funding, and country level capacity building. This can include workshops on lessons learned and good practices in implementing One Health (specially at subnational levels), as well as sustained strategic outreach and advocacy efforts targeting key UN system stakeholders, resource and implementing partners at global, regional and country levels.

Recommendation 2. *For BP3 leadership, OSP and related technical divisions:* Update the One Health results measurement system to better capture progress and results related to the implementation of One Health in FAO projects and activities. The leadership of other relevant PPAs should be involved in these developments to ensure that approaches developed to measure One Health-related results are adapted for the use of other PPAs as needed. This may include:

i. Defining additional One Health result indicators to address gaps in the BP3 results framework.
ii. Developing improved methodological guidance for project leads. These changes would support a better inclusion of a wider range of One Health-specific indicators in measurement systems at project level and methodological consistency in analyses and resulting monitoring indicators for FAO programmes (including beyond BP3).

Recommendation 3. *For BP3 PPA leadership:* Develop and disseminate guidance such as guidelines and toolkits to help One Health practitioners and project teams integrate gender, youth and inclusion using a One Health approach in collaboration with the Rural Transformation and Gender Equality Division. This may include the following:

i. Developing tools similar to the World Bank's Gender Infectious Disease Epidemic Preparedness and Response Toolkit that assists project implementers and governments to develop gender actions plans for animal health in One Health.
ii. Determining how FAO should collaborate with external partners such as International Livestock Research Institute that are already developing a gender and One Health Framework.
iii. Ensuring that all projects have relevant clear and measurable targets on gender, youth (such as age disaggregation) and inclusion, aligned with the FAO policies such as on gender equality, FAO's corporate strategy on youth and the forthcoming new Framework on Inclusion.
iv. Strengthening collaboration and coordination with other FAO divisions, units and partners working on gender and social inclusion issues.

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Appendix 1. FAO and One Health timeline

FAO and One Health Timeline

1997-2004 Outbreaks of emerging and re-emerging infectious diseases spur the international community to develop new approaches to their control.

2005 **International Ministerial Conferences on Animal and Pandemic Influenza** serve as an international platform for the normative elaboration of the One World, One Health concept.

2007 The **New Delhi Roadmap** proposes that the broad principles of 'One World, One Health' form the basis for a medium-term international strategy.

2009 USAID launches its **Emerging Pandemic Threats Programme** (EPT-1) (2009 - 2014)

FAO's Committee of Agriculture underscores FAO's role in the emerging One World, One Health approaches.

2011 Tripartite High Level Technical Meeting to Address Health Risks at the Human-Animal-Ecosystems Interface.

FAO **One Health Strategic Action Plan.**

FAO, OIE, WHO **Four-Way Linking Framework.**

One Health – Seeing Around the Corners A regional communication strategy framework against infectious diseases in Asia and the Pacific (2011-2016).

2013 **FAO World Livestock 2013: Changing Disease Landscapes** advocated for a paradigm shift in risk assessment and mitigation strategies that endorsed the One Health approach.

2015 FAO endorses WHO **global action plan on Antimicrobial resistance.**

2017 **Tripartite memorandum of understanding** reconfirms partners' commitment.

Codex Alimentarius Task Force on Antimicrobial Resistance facilitates One Health approaches across the food chain.

2019 **Taking a Multisectoral, One Health Approach:** A Tripartite Guide to Addressing Zoonotic Diseases in Countries.

FAO supports the development of **One Health National Action Plans on AMR.**

2021 Creation of **One Health High-Level Expert Panel** (OHHLEP).

FAO creates **One Health technical working group** to mainstream One Health across FAO.

FAO **National Framework for One Healt.h**

FAO **Action Plan on Antimicrobial Resistance** (2021-2026).

2023 One Health and the United Nations Sustainable Development Cooperation Framework. **Guidance for United Nations country teams.**

2004 International collaboration on Highly-Pathogenic Avian Influenza

The World Conservation Society symposium launches the **One World, One Health**approach and **Manhattan Principles**

FAO creates **Emergency Centre for Transboundary Diseases** (ECTAD)

2006 FAO launches its **Global Programme for the Prevention and Control of H5N1 Highly Pathogenic Avian Influenza** implemented by ECTAD. The programme expands FAO's work in pandemic prevention and preparedness.

2008 

FAO adopts One World, One Health Framework as part of its global programme on avian influenza.

FAO's successful use of biosecurity in the control of avian influenza becomes a key element in its One Health Approach.

Contributing to One World, One Health: the first strategic framework adopted by the international community to address zoonotic and animal diseases emerging or re-emerging at the animal-human-ecosystem interface.

2010 WHO, OIE and FAO launch a strategic One Health **Tripartite partnership** recognising their shared responsibility in addressing health risks at the human–animal environment interface.

United Nations System Influenza Coordination and World Bank recommend Adoption of One Health Approaches.

Creation of One Health Global Network (2010 - 2015).

2012 The FAO Council highlights the role of One Health in Fora of Importance for the Mandate of FAO.

2014 Launch of the **Global Health Security Agenda.**

USAID **Emerging Pandemic threats programme** (EPT2) (2014-2019).

Growing recognition of antimicrobial resistance (AMR) as multifactorial threat to global health.

2016 FAO **Action plan on Antimicrobial resistance** (2016 -2020) recognises One Health as essential to addressing AMR in agrifood systems.

2018 Tripartite **Memorandum of Understanding on Antimicrobial Resistance.**

2020 FAO **COVID-19 Recovery and Response Programme.**

COVID-19 pandemic

2022 **Quadrapartite** forms and launches The One Health Joint Plan of Action (2022–2026).

FAO creates the **One Health Programme Priority Area** as part of its 2022-2031 Strategic Framework.

Launch of the multilateral **Pandemic Fund.**

Appendix 2. Methodology

Evaluation questions

The evaluation addresses three questions:

i. How did FAO's work in One Health evolve and how has it been implemented? What was the distribution of One Health resources?

ii. How were results in One Health interventions measured?

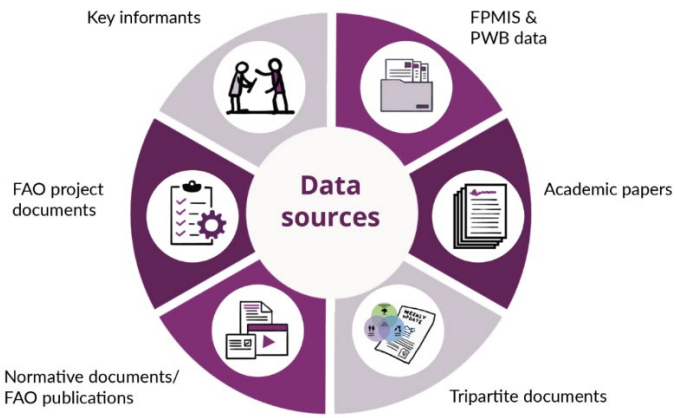
iii. How was FAO's work in One Health perceived by partners and donors?

The evaluation matrix (Appendix 4) outlines all evaluation questions and subquestions including the approach, data sources and methods used for each evaluation question.

Data sources

The Evaluation Team triangulated evidence to enhance the reliability and strength of the findings and conclusions by using the following multiple sources:

Appendix Figure 1
Data sources used in the evaluation



Source: Elaborated by the Evaluation Team.

i. FAO databases: the Evaluation Team used the following databases for the analysis:
   - FPMIS: Field Programme Management Information Systems Reports.
   - PIRES: Programme Planning, Implementation Reporting and Evaluation Support System.
   - COIN: Country Office Information Network.
   - PWB: Programme of Work and Budget.

ii. Tripartite/Quadripartite and FAO normative documents and publications: Strategic documents, which have or continue to serve as overarching framework for all OH work taking place within FAO and the Tripartite/Quadripartite.

iii. Academic papers on the various definitions and history of One Health. These additional documents were selected based on analysis of references in key reports, plans and platforms, and trusted search engines (PubMed, Science Direct, Scopus, Web of Science), along with recommendations and/or materials provided from key informants.

iv. Project documents and other related materials, such as monitoring and evaluation tools and activity reports, which pertain to projects identified as One Health (OH) interventions in the FAO databases.

v. Key informants within FAO, Quadripartite and other key partner organizations working on One Health (these were shortlisted based on the stakeholder mapping and analysis). Interviews were also conducted with retired FAO personnel who were active participants in One Health issues during the period under review.

Methods

To answer each of the evaluation questions, including the ones relating to cross-cutting theme, similar methods were used. The following is a summary of the methods used in the evaluation:

Stakeholder mapping and analysis

During the inception phase the Evaluation Team identified different sets of stakeholders per priority question, specifying the rationale for inclusion and participation method. This included:

i. Stakeholders who were involved or oversaw the development, formulation and agreement of normative organizational concepts or approaches to One Health within FAO and/or Tri/Quadripartite over the evaluation period.

ii. Stakeholders who have been involved in the operationalization or implementation of FAO and/or Tri/Quadripartite One Health concepts or approaches in completed or ongoing OH projects, including those with the authority to make decisions related to how results and progress were monitored and reported in normative work and projects implemented by FAO.

iii. Stakeholders who have been involved in the implementation, monitoring and evaluation of progress and results of completed or ongoing OH projects, including those projects that include gender, youth, Indigenous Peoples and inclusion (project implementers).

iv. External stakeholders with direct involvement in OH activities, such as the Tripartite (Quadripartite) partners, resource partners and funds, and other implementing partners at international and national levels

Document analysis and review

The Evaluation Team carried out a multi-level contextual document review to collect, summarize, and comparatively analyse the evolution of operational definitions of One Health within and outside FAO in the designated period (2010–2023). Strategic level documents were analysed using an inductive approach and following criteria:

i. identification of One Health concepts (including related terms);

ii. selection of appropriate realm (sample and setting) for data collection;

iii. collection of relevant data to identify the concepts;

iv. analysis of data about the above characteristics; and

v. selection and analysis of exemplars.

Descriptive historical analysis and framing

The evaluation used a descriptive historical analysis which provides important insight into how understandings and uses of One Health varied and changed (and continue to vary) within the FAO, among its regions, Members Nations and partners, and among experts, organizations and communities who have taken up use of the concept outside FAO. It thus brought into view challenges with integrating One

Health into existing programme areas, projects, and regional and national plans. Just as importantly, it highlighted successes in the implementation of One Health approaches, which set the ground for the Joint Plan of Action (2022–2026) of the Quadripartite and FAO's Programme Priority Area on One Health (BP3).

Based on this analysis, the evolution and development of One Health concepts and approaches within FAO were broken down into four chronological but overlapping phases:

i. 2004–2010: Beginnings: FAO's One Health Response to HPAI
ii. 2011–2015: The First One Health Strategic Action Plan
iii. 2016–2019: AMR and embedding One Health in FAO
iv. 2020–2023: BP3 and mainstreaming One Health

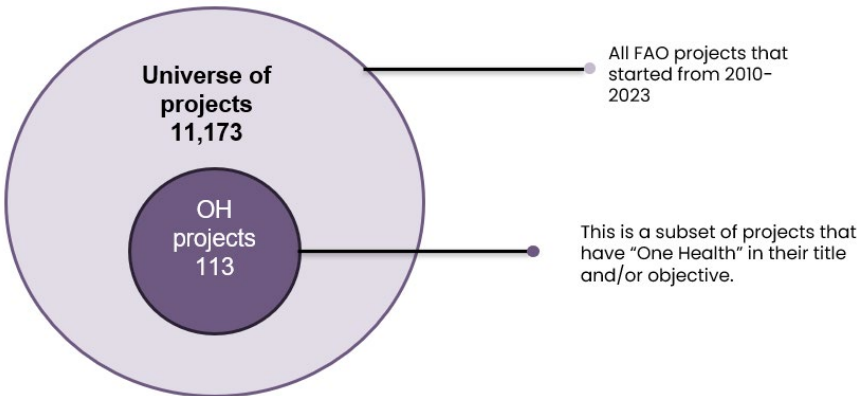
A working assumption in this analysis is that a One Health approach will have implicit notions of what counts as a One Health problem and what counts as a One Health solution. As such, three "framing" questions were used to inform the analysis of each phase in the evolution of FAO's One Health approach:

i. What contextual factors shaped the conceptualization and operationalization of OH?
ii. What diseases, hazards or health issues have been identified and prioritized as OH problems?
iii. How have multisectoral and multidisciplinary (or transdisciplinary) approaches been defined and operationalized?

Portfolio analysis

The portfolio analysis informed all sections of the report, especially the areas of resourcing and measuring progress and results. The Evaluation Team used two datasets as seen in Figure Appendix 2.

Appendix Figure 2
A Portfolio Universe



Project and data analysis

For the project review, the Evaluation Team conducted a systematic analysis of FAO documents to characterize the methods and indicators used over time to measure the results of interventions corresponding to "One Health" between 2010 and 2023. Two types of documents were considered: i) documents and terminal reports of projects that were accessible in the FPMIS database that explicitly contain One Health in their title or in their objectives; and ii) key monitoring and evaluation guidance documents that served or currently serve to structure the monitoring of One Health projects at FAO (to be referred to as "strategic documents" in the report). The monitoring and evaluation guidelines were imported into NVivo qualitative analysis software to facilitate the analysis. The selected projects documents were reviewed, and relevant text elements were extracted in a data collection tool developed with Excel.

The same project documents were also used to analyse the interventions related to gender and social inclusion in One Health.

The analysis was conducted differently for projects implemented between 2010 and 2021 compared to those implemented in 2022 and 2023. For OH projects implemented between 2010 and 2021, the process identified 43 project documents in FPMIS that contain One Health in their title and/or objectives. All of these were considered for the analysis. The evaluation used descriptive statistics to show how results were monitored over this time.

For projects implemented in 2022 and 2023, 70 projects that contain One Health in their title and/or objectives were found in the FPMIS database. Twenty of those projects were selected based on their budget size and on the availability of documentation in the database at the time of data extraction.

To describe the main results indicators used over the study period, a thematic analysis was carried out using mainly an inductive approach based on the main themes that emerged from the logframe and available documentation. The main methods and result indicators used to measure OH projects were synthesized and compared over time, and across regions and different types of projects. This data informed the analysis for both the section on measuring results and the section on gender and social inclusion.

Analysis of human resources and financial resources

The Evaluation Team analyzed the distribution of human resources in two steps: first at the micro level with a sample of One Health projects (n=113 of which 108 had the necessary data), and second at the macro level with PWB data on staffing by division. For the financial analysis, a comparative analysis between the FPMIS universe of projects (n=11 173), and OH projects (n=113) was conducted.

Semi-structured interviews

The Evaluation Team conducted semi-structured individual interviews with 73 stakeholders (59 from FAO and 14 non-FAO stakeholders) to i) fill in missing information that could not be retrieved from strategic and project documents during the document analysis; and ii) access testimonies and insights about the development of OH concepts, complementary practices related to measurement of results, gender and social inclusion, and the perceptions of external partners that were not otherwise recorded in existing documents.

Quality assurance

The evaluation benefited from internal Office of Evaluation quality assurance. Additionally, the Evaluation Team recruited a technical adviser to provide further technical feedback on the evaluation process and findings.

Appendix 3. Description of One Health projects implemented by FAO over the period 2010–2021

Appendix Box 1
Description of OH projects implemented by FAO over the period 2010–2021

Appendix Table 1 presents a distribution of the number and proportion of projects over three periods of time (2010–2015, 2016–2019 and 2020–2021), which correspond to historical phases of importance for the integration of OH in the FAO agenda (see section on the evolution of OH in FAO). Proportions should be interpreted with caution, given the small number of projects available for analysis, particularly in the first two time periods.

Appendix Table 1
Duration, geographic location, and topic/focus of One Health projects (2010–2021)

		2010–2015	2016–2019	2020–2021	All
		N (% in the period)			
Total		5	8	18	31
Completed		5 (100)	7 (88)	12 (67)	24
Mean duration		4.4	3.3	2.6	3.1
Duration range		2.0-8.2	1.5-6.3	1.0-3.4	1.0-8.2
	Regions				
	Asia	2 (40)	1 (13)	7 (39)	10
	Africa	2 (40)	3 (38)	7 (39)	12
	Latin America	1 (20)	3 (38)	1 (6)	5
	Global	0 (0)	1 (13)	3 (17)	4
	By main topic				
	Specific disease	2 (40)	2 (25)	2* (11)	6
	Veterinary services	0 (0)	1 (13)	1 (6)	2
	Food safety	1 (20)	0 (0)	1 (6)	2
	AMR	0 (0)	4 (50)	9 (50)	13
	OH systems	2 (40)	1 (13)	5 (28)	8
Inclusion of OH/intersectoral indicators		3 (60)	5 (63)	18 (100)	31

* 2 projects on COVID-19 response

Overall, the number of OH-projects implemented by FAO increased with time, from 5 projects in the first period (2010–2015, 6 years), 8 during the second period (2016–2019, 4 years) and 18 projects during the third period (2020–2021, 2 years). We can observe some variation in the targeted regions, with most OH-projects targeting countries in Asia and Africa in the more recent period. Regarding the main topic/focus of OH projects, more projects targeted global issues such as AMR and OH systems in the most recent period when compared to the other two, with an important proportion of projects (50 percent) AMR-focused starting in the 2016–2019 period and maintained during the 2020–2021 period.

Appendix Box 2
Result indicators from the Pandemic Fund

Result Area 1: Building capacity/demonstrating capability

i. Sustainment or improvement of capacity as a result of Pandemic Fund projects, as measured by improved or sustained scores for indicators within the Joint External Evaluation (JEE) and Performance of Veterinary Services (PVS), when available, and States Parties Self-Assessment Annual Report (SPAR), or other relevant assessments.

ii. Number of after/intra-action reviews or simulation exercises performed utilizing the 7-1-7 approach that identify strengthened capacities, gaps in capacity, and bottlenecks to improve detection, notification and response.

iii. Percentage of the capacities that were improved or maintained by the Pandemic Fund projects (in 1a), that are able to be effectively utilized during an infectious disease outbreak or other public health threat, as measured by an intra/after-action review or simulation exercise.

iv. Percentage of Pandemic Fund projects' activities that support gaps identified in countries' National Action Plans for Health Security (NAPHS), or other relevant plans

Result Area 2: Fostering coordination nationally (across sectors within countries), and among countries regionally and globally

i. Inclusion of regional platforms, institutions, networks and priorities in Pandemic Fund projects.

ii. Establishment or improvement of processes/mechanisms that allow for cross-sectoral coordination within the country and between countries during a health emergency.

iii. Extent to which Pandemic Fund projects are implemented in coordination with multiple ministries, sectors and stakeholders (including implementing entities [IEs], civil society organizations and others).

Result Area 3: Incentivizing additional investments in pandemic prevention, preparedness, and response (PPR)

i. Value of additional financial resources that are secured from stakeholders to support Pandemic Fund projects, including domestic, private and/or philanthropic financing, or as co-financing from IEs.

ii. Proportion of funding from Pandemic Fund that is used to complement/strengthen existing health security and health system capacity building projects, including but not limited to those funded by domestic resources, other existing development funds, other partners' global health security, health system, or PPR funds, and philanthropic or other private sector funds.

iii. Extent to which the capacities built by Pandemic Fund projects are sustained following completion of the project

Result Area 4: Ensuring administrative/operational efficiency of Pandemic Fund resources

i. Pandemic Fund grant amount disbursed for projects as a proportion of total Pandemic Fundgrant amount committed to IEs.

ii. Time for IEs to fully disburse Pandemic Fund grants committed to them.

iii. Of the total amount of Pandemic Fund grants committed to IEs, proportion used by IEs for administrative costs including project preparation, implementation and supervision.

iv. Funds utilized for project-level M&E as a proportion of project funds initially allocated for M&E.

v. Gender equality incorporated in activities implemented through the proposals.

vi. f. Extent to which Pandemic Fund-funded activities advance health equity across underserved populations

Appendix Box 3
The three SDG targets for BP3 and their indicators

SDG 1.5: By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters.

SDG indicator 1.5.3: Number of countries that adopt and implement national disaster risk reduction strategies.

SDG 3.d: Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks.

SDG indicator 3.d.1: International Health Regulations (IHR) capacity and health emergency preparedness.

SDG 15.8: By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species.

SDG indicator 15.8.1: Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species.

Appendix Box 4
The six BP3 core functions

Data services for One Health decision-making: global pest, disease and health data systems on animal and plant pests and diseases for epidemic management and investment decisions in national health systems.

Norms and standards development in sanitary and phytosanitary measures (SPS) areas, biosecurity and health security systems (with SPS performance, including plant health).

Governance (including arrangements with the United Nations (UN) system, as well as non-UN partnerships) in the One Health/ecosystem services and biodiversity interface, and with FAO Members regarding measuring performance of health systems and AMR progress, and with International Plant Protection Convention (IPPC) and food safety standards (Codex Alimentarius).

Capacity development for One Health and biosecurity implementation, through digital tools and partnerships, with innovative extension and adult learning for national human capital development.

Policy development: implementation of the global strategies for major animal and plant pests and diseases, including *peste des petits ruminants*, African swine fever, fall armyworm, locust management, Global Framework for the Progressive Control of Transboundary Animal Diseases (GF-TADs), Global Action Plan on AMR

Lead policy dialogues and processes with FAO Members and regional organizations, the private sector and civil society.

Appendix Box 5
Synthesis of discussions with regards to reporting mechanisms during the 2023 FAO One Health PPA Workshop Report

Consistent and transparent reporting on OH impact and results is another underlying enabler for PPA success. Countries and resource partners alike want to know why they should invest in projects and they desire data on successful implementation.

Participants mentioned several times that they wanted **data on**:

- the long-term impact of OH, for example, through InFARM for AMR, and including the impact of legislation; and
- OH's economic impact. This will facilitate countries in going beyond the Minister of Agriculture or Health and in conducting cost-benefit analyses for projects.

Two ideas to overcome the challenge of **scarce resources** for reporting were:

- pooling OH projects to look at OH results comprehensively, rather than project-by-project; and
- committing a percentage of project budgeting to the FAO Office of Evaluation for monitoring, evaluation and learning (MEL) activities.

Participants mentioned **early warning systems** specifically as an area with reporting difficulties. Ideas to overcome the challenges to reporting include:

- monitoring the upstream drivers of diseases;
- acquiring information earlier through participatory approaches such as Farmer Field Schools;
- including the production team in the conversation early on.

Appendix Box 6
Example of information and elements related to the output indicators "a.1.1: Number of coordination mechanisms/platforms established/strengthened/scaled up" and "a.2.1: Number and types of information sharing mechanism established" provided in the data

Instructions and definitions

What to report: i) established/strengthened/scaled up multisectoral coordination mechanism such as: One Health platforms, national coordination mechanism, discussion for other multisectoral collaboration mechanisms; ii) established or strengthened information sharing mechanism such as: formal and informal risk mitigation, surveillance, outbreak response, AMR, and laboratory information sharing mechanism.
Information sharing refers to the transfer of data, knowledge and evidence within and from one sector, that is received by another sector or sectors.

Information sharing mechanisms include meetings (ad hoc, periodic, coordination, TWG), workshops (involving multiple sectors and dedicated to information sharing), websites, networks, newsletters, information systems. (internal tool).

Data are collected for the following elements:

A [activity completion]	B [FAO contribution]
Name of the mechanism Type of mechanism Was this mechanism established, strengthened and/or scaled up? Is the mechanism formal or informal? Select geographical scope (e.g. national, subnational) Select the scope by sectors involved (multilateral, multisectoral, both) Select area/Theme Indicate which sectors are represented in the coordination mechanism: private sector, wildlife, environment, animal Health, public/human health, other	Describe the support you provided to strengthen the mechanism Explain why the mechanism is now stronger Did the number of represented sectors in this mechanism increase during this reporting round? Please list the newly represented sectors Has the mechanism been scaled up to subnational level? What proportion of administrative units (e.g. districts) have established the coordination mechanism? Is the government providing financial support to the mechanism? What percentage of the mechanisms core budget is covered by the government? Please provide any further information on the mechanism that highlights its effectiveness

Appendix Table 2
Selected results-indicators used for OH-projects by topic/focus and period

2010–2015 and 2015–2019	2020–2021
Food safety and veterinary services	
Impact: Meat exports will be improved **Outcome:** Veterinary services and legal framework are improved to support livestock sector development: **Outcome indicators:** Legal review for new animal health law; review of Veterinary Service standard operating procedures (SOPs). **Output indicators:** Advisory report provided on strengthening veterinary systems (OH_2017_01).	**Impact:** Improved food safety, biosecurity and risk communication systems of fresh food markets and street food. **Outcome:** Enhanced national understanding of the current situation of fresh food markets and street food systems and communication. **Outcome indicator:** Two national situation reports and two workshop reports with the list of priority action items for each pilot country. **Output:** Using a One Health approach, stakeholder consultations will be held to confirm the priority action items. **Output indicator:** Relevant workshop reports with the list of priority action items in the recommendation section (OH_2021_03).
Specific disease	
Impact: Human rabies in Central Africa is eliminated "zero cases by 2030". **Outcome:** The capacities of the subregion and Central African countries to combat zoonoses through the One Health approach are strengthened: **Outcome indicator:** Proportion of bite and rabies cases reported by national surveillance systems. **Output:** Integrated rabies surveillance and reporting system (animal and human) is in place in all 8 countries. **Output indicator:** Number of Four-Way Linking Framework (4WL) platforms operational (OH_2019_03).	**Outcome:** Animal health services at country and regional levels have improved capacities to detect SARS-CoV-2 and are prepared for adequate response under the One Health approach: **Outcomes indicator:** Number of countries with animal health services having appropriate capacities to implement guidelines or recommendations provided by the project. **Output:** Multisectoral networks at country and regional levels are established or strengthened to coordinate efforts and share information related to COVID-19 at the animal-human interface in a timely manner. **Output indicator:** Number of meetings organized by the project to coordinate efforts and information shared among stakeholders on COVID-19 or SARS-CoV-2 related issues (OH_2020_13).
Antimicrobial resistance	
Impact: Reduce AMR emergence and minimize adverse impacts of AMR on the food and agriculture sector, food safety and public health. **Impact indicators**: Reduction in prevalence of antimicrobial resistant microorganisms detected in food, feed, animals, and the environment; reduction in use of antimicrobial drugs in food producing animals and agriculture sector. **Outcome:** Minimize the (bilateral human-animal) transmission of antimicrobial resistant microorganisms and/or determinants via the food chain and environment. **Outcome indicators:** Proportion of countries with improved capacity to detect resistance and track antimicrobial resistant microorganisms transmission and use; proportion of countries with a One Health AMR governing body in place. **Output:** Multisectoral National Action Plans (NAPs) aligned with global recommendations and standards in place in targeted countries. **Output indicators:** Number of countries in which NAPs have been developed engaging multisectoral stakeholders; number of stakeholders reached or sensitized on AMR (OH_2016_02).	**Impact:** Countries make explicit commitments (policies, investment plans, programmes, legal frameworks, resources allocation) on AMR based on evidence and quality data. **Outcome:** Increased comprehensiveness and quality of the policy dialogue and practice. **Outcome indicator:** Number of countries whose AMR multisectoral coordination mechanisms engage with a broad range of relevant partners; number of countries that implemented one or more (additional) international instruments on AMR. **Output:** Systems for optimized use strengthened in critical sectors. **Output indicator:** Guidelines for responsible and prudent use of antimicrobials based on international standards are developed or revised (OH_2021_07).

2010–2015 and 2015–2019	2020–2021
One Health systems	
Impact: Building strong and sustainable national health systems that are able to safeguard global health security. **Output 1:** Collaboration between human and animal health systems is improved nationally and regionally. **Output 1 indicator:** Number of OH national or regional policy documents formulated/reviewed; number of joint risk assessment (JRA) training conducted at national level; number of disease specific joint preparedness and response plan develop or revised; number of SIMEX scenario and guidelines developed. **Output 2.** Coordinated mechanisms for the evaluation of OH operationalization are in place. **Output 2 indicator**: Tool/Framework for the evaluation of OH operationalization adopted; number of evaluations conducted at the national level using the adopted framework; number of regional OH technical review meetings. **Output 3.** Regional governance mechanism of the FAO-WOAH-WHO tripartite is established. **Output 3 indicators:** Tripartite annual programme and operational framework; number of WHO/AFRO and/or WOAH OH related activities attended by FAO personnel and vice versa. Note: there is a second results matrix called "option period" not included here (OH_2019_01).	**Impact:** Strengthen animal health systems to reduce the risks and impacts of emerging infectious diseases, antimicrobial resistance, and bio-threats through an inclusive One Health approach. **Impact indicator:** Decreased animal/human health, and socio-economic impact from emerging infectious diseases, antimicrobial resistance, and biothreats in the region **Outcome:** Improved collaboration among One Health partners **Outcome indicators:** One Health coordination mechanism, including AMR, zoonosis and food safety technical areas, established; percent of joint activities between multilateral or multisectoral partners conducted as a result of recommendations from meetings. **Output 1:** One Health operationalization among stakeholders at the national level demonstrated for agreed priority diseases and selected activities. **Output 1 indicator:** Number of meetings jointly participated by the ministries on the One Health coordination mechanism. **Output 2:** One Health workforce capacity strengthened. **Output 2 Indicator**: Number of Cambodian Applied Veterinary Epidemiology Training (CAVET) cohorts receiving technical support from the project. **Output 3:** One Health approach on AMR advocated. **Output 3 indicator:** Number of One Health events organized on AMR (OH_2020_09).

Appendix 4. Evaluation matrix

Priority Area: Shared understanding of concepts, definitions, operationalization

#	Key Question	Subquestions	Data sources	Methods
1	How did FAO's work in One Health evolve how has it been implemented? What was the distribution of One Health resources?	1.1 What was the operational definition of OH used in projects claiming to implement a "OH" approach? 1.2 How do the operational definitions of OH differ across division at headquarters, in regions and in countries offices? 1.3 How did the operational definition of OH evolve over time within FAO? 1.4 What was the distribution of financial and human resources among OH-relevant divisions at headquarters, regional and country levels? 1.5 How were financial and human resources distributed within OH projects among the various pillars of OH? 1.6 What was the perception of stakeholders regarding the factors influencing financial and human resource allocation among divisions/offices?	• Database: FPMIS • Documents: FAO and other publications on OH, normative products, project documents, Programme of Work and Budget (PWB) • Key informants: FAO personnel (including regional and country), partners, stakeholders, donors	• Literature review • Portfolio analysis and project review • Analysis of budget and human resources from PWB, PIRES and FPMIS • Semi-structured interviews • Exemplar case studies

Priority Area: Measuring progress and results

#	Key Question	Subquestions	Data sources	Methods
2	How were results in One Health interventions measured?	2.1 How were OH-related results measured under the previous strategies? 2.2 What were the most significant OH-related results reported in this period? 2.3 How were cross-cutting themes of gender, youth and inclusion monitored and reported in OH-related activities? 2.4 How did the results measurement system for OH evolve over time? 2.5 How did the results measurement system for OH vary across regions? 2.6 How did the results measurement system for OH vary across different project types?	• Documents: project documents, evaluations, progress/annual reports, M&E tools/framework • Key informants: FAO personnel, partners, stakeholders, donors	• Semi-structured interviews • Document review and analysis • Portfolio analysis • Exemplar case studies (including Global Health Security Agenda [GHSA])

Priority Area: Interagency collaboration, FAO's role/comparative advantage in One Health and the Quadripartite				
#	**Key Question**	**Subquestions**	**Data sources**	**Methods**
3	How was FAO's work in One Health perceived by partners and donors?	3.7 What areas of OH did FAO work in? 3.8 Which areas of OH did the other members of the Quadripartite work in? 3.9 How did FAO describe/"market" its OH-related work towards donors over time? 3.10 What did the other members of the Quadripartite consider to be FAO's value within OH? 3.11 What type of OH-related FAO/ Quadripartite work was funded by which donor? 3.12 Who did FAO partner within countries for OH work implementation?	• Documents: reports, partnership strategies, etc. • Key informants: FAO, Quadripartite and other partners	• Document analysis • Semi-structured interviews • Stakeholder mapping and gaps analysis of partnerships • Targeted online survey •

Appendix 5. NEOH evaluation framework

The following is an adaptation of the Network for the Evaluation of One Health (NEOH) evaluation framework prepared by the Evaluation Team:

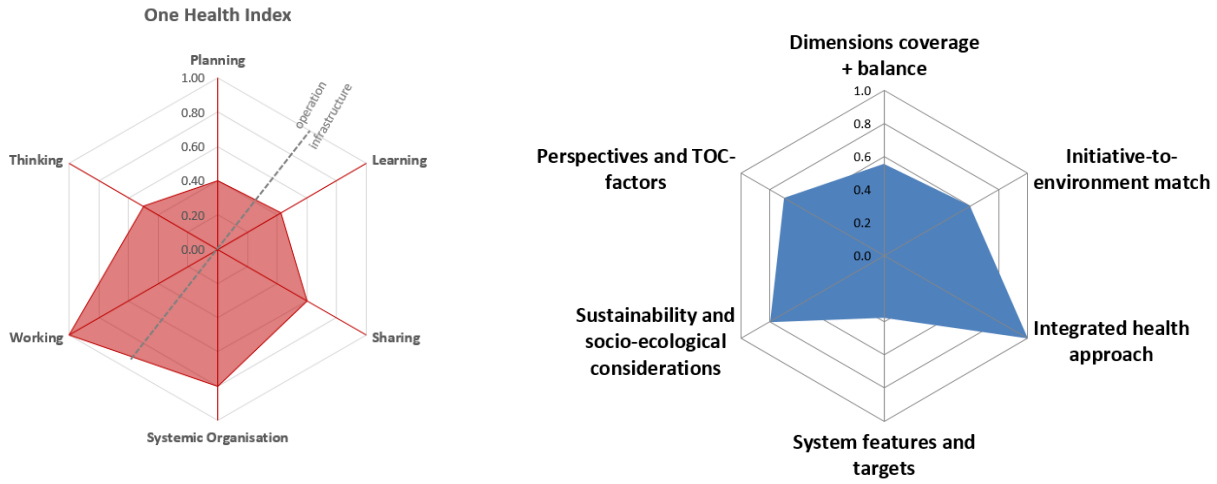
Six dimensions for the evaluation of One Health, each with sub-domains:

Thinking	Planning	Working
T1 – Dimensions coverage and balance T2 – Initiative to environment match T3 – Integrated health approach T4 – System features and targets T5 – Sustainability/socioecological considerations T6 – Perspectives/application of theory of change	P1 – Common goals P2 – Stakeholder and actor engagement P3 – Self-assessment and plan revision P4 – Capacity for detection, identification and monitoring of diseases P5 – Enhanced biosafety and quality management P6 – Skills development through taught and distance learning P7 – Enhanced information and communication technologies P8 – Skills through research apprenticeship	W1 – Broadness of the initiatives W2 – Collaboration W3 – Transdisciplinary balance W4 – Cultural and social balance W5 – Flexibility and adaptation

Sharing	Learning	Systemic organization
S1 – General information awareness sharing S2 – Data and information sharing S3 – Methods and results sharing S4 – Institutional memory and resilience	L1 – Adaptive and generational individual learning L2 – Adaptive and generational team learning L3 – Adaptive and generational organization learning L4 – Direct learning environment supportive of adaptational and generational learning L5 – General learning environment supportive of adaptational and generational learning	S01 – Team structures S02 – Social and leadership structures and skills S03 – Competence S04 – Focus and innovation

Source: Rüegg, S. R., Häsler, B., & Zinsstag, J. 2018. Integrated approaches to health: A handbook for the evaluation of One Health (S. R. Rüegg, B. Häsler, & J. Zinsstag, Eds.). Wageningen Academic Publishers. https://doi.org/10.3920/978-90-8686-875-9

Appendix Figure 3
Evaluation produces spider diagrams showing Performance across the six dimensions (example of an organization in west Africa)



Note: Sub-domains are similarly scored and mapped, e.g. Thinking dimension (the higher the score the better the performance).
Source: Elaborated by the Evaluation Team.

Appendix 6. People interviewed

Internal (FAO)

	Name	Unit	Position/title
1.	Ahmed Al-Naqshbandi	NSAH	Monitoring, Evaluation, and Learning (MEL) Global Coordinator
2.	Aissa Mamadoultaibou	FAOSFC	Nutrition Officer
3.	Alejandro Accosta	NSAL	Policy Officer
4.	Anabella Kaminker	OSP	Strategy and Planning Officer
5.	Anne Brunel	PSUI	Technical Officer
6.	Arithi Mutembei	FAOKE	National One Health Specialist
7.	Baba Soumare	NSAH-CJW	Senior Animal Health Officer
8.	Barbara Hasler	NSAH-CJW	Science Evidence Lead (One Health)
9.	Benedetta ArangioRuiz	NSAH-CJW	VLC on female leadership in One Health
10.	Bruno Minjauw	OER	Emergency Information Management Support Specialist
11.	Carmen Bullon	LEGN	Legal Officer
12.	Charles Bebay	FAOKE	Regional Manager
13.	Cyprien Biaou	FAOSFC	Livestock Development Officer
14.	David Conte	OSP	Special Advisor
15.	Dominique Burgeon	FAOLOG	Director and ex-coordinator of SO5
16.	Emma Alegi	NSA	Gender focal point for livestock
17.	Eran Raizman	FAOREU	Senior Animal Production Health Officer
18.	Evans Tenge	FAOKE	Monitoring, Evaluation, and Learning (MEL) Specialist
19.	Eric Brum	ECTAD Bangladesh	Team Leader
20.	Fairouz Larfaoui	NSAH-CJW	Animal Health Officer
21.	Friederike Mayen	FAORNE	Senior Livestock Development Officer
22.	Felix Njeumi	NSAH-CJW	Gender focal point for NSA
23.	Francesca Dalla Valle	ESP	Focal Point for Youth
24.	Francesca Terzoli	NSAH-CJW	Program Support Specialist
25.	Gerald Mucheru	FAOKE	Virtual Learning Centre Coordinator for Eastern Africa
26.	Ilaria Sisto	ESP	Focal point for gender
27.	Ismaila Seck	NSAH	Animal Health Officer
28.	Jeff Lejeune	ESF	Food Safety And Quality Officer
29.	Javier Bravo	NSAP	Focal point for Youth
30.	Jeffrey Gilbert	FAOKH	Animal Health Advisor
31	Juan Lubroth	Retired CVO	Former Chief Veterinary Officer
32.	Julio Pinto	NSAH-CJW	Animal Health Officer
33.	Junxia Song	NSAH-CJW	Senior Animal Health Officer

	Name	Unit	Position/title
34.	Keith Sumption	Retired FAO Staff	Former Chief Veterinary Officer (FAO)
35.	Katinka de Balogh	Retired FAO Staff	Former FAO Staff
36.	Katrin Taylor	PSR-NSA	Program Officer
37.	Madhur Dhingra	CJWZ	Senior Animal Health Officer
38.	Martin Vincent	OIN	Director
39.	Marisa Caipo	FAORLC	Food Safety and Quality Officer
40.	Melba Reantaso	NFIMF	Aquaculture Officer
41.	Mohammed Shamsuddin	CFI	Senior Animal Production Officer
42.	Mona Chaya	DDCC	Special Adviser
43.	Monica Romano	ESP	Focal Point For Inclusion
44.	Moussa Sanogo	FAOSFW	West Africa Virtual Learning Center Coordinator
45.	Rosanne Marchesich	OER	Senior Emergency and rehabilitation officer
46.	Sandra Ratiarson	FAOSFC	Forestry Officer
47.	Sasha Koo-Oshima	NSL	Deputy Director
48.	Scott Newman	FAORAP	Senior Animal Production Health
49.	Sarah Cahill	CJW	Senior Food Standards Officer
50.	Shiroma Sathyapala	NFO	Forestry Officer
51.	Shoki Al Dobai	NSP	Senior agricultural officer
52.	Thanawat Tiensin	NSA	Director
53.	Valentine Ekechukwu	OER	Emergency Information Management Support Specialist
54.	Yurdi Yasmi	NSP	Deputy Director/Special Coordinator
55.	Zelalem Tadesse	CJWZ	Senior Animal Health Officer

External

	Name	Organization	Position/Title
56.	Gerard Den Ouden	Organization of Caribbean and Pacific States Research and Innovation Programme	Programmme manager
57.	Jean-Philippe Dop	WOAH	Deputy Director General for Institutional Affairs and Regional Activities
58	Chadia Wannous	WOAH	One Health Global Coordinator
59	Zandra Andre	USAID	GHSA- Technical Advisor
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