

ETHIOPIA

AMR MPTF Project 2023 Report

Overview

Project: AMR MPTF support for the implementation of the Ethiopian One Health AMR prevention and containment strategy (project ID; 00127140)

Duration: 24 months (2 years), 1 July 2021 to 25 May 2024

The AMR-MPTF project in Ethiopia supports the design and implementation of systems strengthening in policy and programs; generating, interpreting and using evidence-based data for decision-making; and improving antimicrobials use behavior change practices. Main activities include:

- Supporting the functioning of the multi-sectoral and multi-disciplinary AMR prevention and containment advisory committee and technical working groups (TWGs).
- Updating and monitoring the implementation of the One Health (OH) AMR prevention and containment strategic plan and AMR MPTF project.
- Developing OH communication, stakeholder's analysis and engagement strategy, and behavior change materials.
- Establishing/Strengthening sustainable human and animal antimicrobials sensitivity testing (AST) and AMR surveillance systems and data capturing.
- Strengthening health care associated infections (HAI) prevention and control and scaling up AMR prevention and containment evidence (including antimicrobial stewardship - AMS) and good practices guided by/with AMR surveillance.
- Supporting behaviors change practices for optimized use of antimicrobials.
- Developing and implementing user-friendly animal species-specific treatment guidelines based on international recommendations.
- Developing safe and quality animal source food production with consideration of antimicrobial withdrawal times and maximum residue limits.

Project progress: Joint activities implemented.

Outcome: Risks of and response to benefits of AMR reflected in national budgets and multi-lateral partner sector-wide investments

Output 1. Improved country capacity in designing and implementing AMR related policy frameworks, investment plans, and program

Multisectoral coordination and awareness on AMR improved:

- FAO and WHO organized the One Health (OH) World Antimicrobial Resistance Awareness Week (WAAW) 2023 events with the Theme: "Preventing Antimicrobial Resistance Together".



WAAW 2023 photo

- FAO and WHO contributed to the compilation and sharing of the report above mentioned OH WAAW 2023 (WAAW) 2023 to wider audience. Some of the main events included in the report are:
 - *Consultative workshop with media professionals*
 - *Training for secondary school mini media clubs*
 - *Official Launch and panel discussion of WAAW 2023 events*
 - *Sensitization Event for EPHI's staff*
 - *Experiences sharing and on-site visit at the Animal Product & Input Quality Testing Center (APIQTC) of the Ethiopian Agriculture Authority*
 - *Agriculture Sector WAAW 2023 event*
 - *Continuing Medical Education (CME)*
 - *Programs in Electronic, printing, and social Medias*
 - *Sector specific events.*
 - *Agriculture sector World AMR Awareness Week (WAAW) Workshop, Theme: "Preventing Antimicrobial Resistance Together" 24 November 2023, Adama*
- FAO and WHO contributed in the drafting of the Governance Framework for Antimicrobial Resistance Prevention and Containment, 2024.
- FAO and WHO have contributed to the development, planning and costing of second National Action Plan for Health Security (NAPHS) 2024-2028 in Ethiopia towards building capacities to prevent, detect and response to health threats and public health emergencies as highlighted by the second Joint External Evaluation (JEE).and further strengthening Ethiopia's health security capabilities and resilience, 4 to 7 and 25 to 31 March 2024.

AMR communication and stakeholders' engagement strengthened:

- The Tripartite (WOAH-FAO-WHO) drafted, reviewed and validated the One Health AMR prevention and containment communication and stakeholders' engagement strategy, 11 to 14 Dec 2023.
- WOA and FAO engaged 20 animal source food producers and animal health care providers on the one health AMR prevention and containment communication strategy, 18 to 19 Dec 2023.

AMR Monitoring and Evaluation (M & E) strengthened:

- The Tripartite (WOAH-FAO-WHO) drafted, reviewed, and validated plan for Monitoring and Evaluation of the one health antimicrobial resistance prevention and containment strategic framework and Key Performance Indicators (KPIs).
- The Tripartite (WOAH-FAO-WHO) organized capacity development training on AMR M & E and KPIS to 35 (3 females) one health AMR focal experts and national AMR advisory committee members. The AMR-MPTF M & E training equipped the national AMR stakeholders with the necessary skills and tools pertaining to M & E of AMR and enabled them to follow the progress and performance of AMR prevention and containment strategic framework in their respective sectors and institutions. Web article entitled “Antimicrobial resistance focal experts and advisory committee members trained on AMR Monitoring and Evaluation in Ethiopia” <https://www.fao.org/antimicrobial-resistance/news-and-events/news/news-details/fr/c/1637689/>

AMR MPTF lesson learned and strengthened:

- The Tripartite (WOAH-FAO-WHO) organized quadripartite AMR MPTF Lesson Learning Workshop for Ethiopia to 36 (6 females) for one health participants, 7 to 8 June 2023. The workshop discussed successes, best practices, challenge, and ways of improving AMR strategy implementation in general and MPTF project in particular.



Lesson learned workshop participants, credit mobile photo.

- Participated at the Quadripartite (WHO, FAO, WOA, and UNEP) African Regional Lessons Learned Workshop for Implementation of AMR National Action Plan of more than 25 countries and 89 delegates, 10 to 13 July 2023, Dakar, Senegal. At the workshop four Ethiopian one health delegates participated and shared experiences of the Ethiopian One Health AMR prevention and containment lessons over the years.



FAO participants at the Quadripartite Africa Regional Lesson Learned Workshop, credit mobile photo, Charles Bebay

Outcome: Use of antimicrobials optimized in critical sectors

Output 4: Systems for Optimized use strengthened in critical sectors.

- WOA and FAO organized workshop to develop methods and tools on farm level AMU and AMC data collection to 20 (3 females) participants from the agrifood sector, 26 to 28 Feb 2024.

FAO and agriculture specific implemented activities

Outcome: Risks of and response to benefits of AMR reflected in national budgets and multi-lateral partner sector-wide investments

Output 1. Improved country capacity in designing and implementing AMR related policy frameworks, investment plans, and program.

- The FAO AMR MPTF coordinator provided a virtual 2 units Continuing Medical Education (CME and Continuing Professional Development (CPD) on Antimicrobial Resistance Prevention and Containment to more than 205 professionals from medicine, pharmacy, veterinary and environmentalists in practice awareness raising, on 23 November and 1 Dec 2023. It was organized by the Ethiopian Medical Association, Pharmaceutical, Veterinary and Environment Health Professionals Associations. The posters shown below:



- Organized FAO global webinar entitled: Situational analysis of AMR, laboratory capacities, surveillance systems and containment in Ethiopia, 13 April 2023 link: <https://www.youtube.com/watch?v=2p08w-w61a4>

Outcome: Evidence based and representative data on AMU and AMR improved for policymakers and sectors implementing AMU practices

Output 2. Systems for generating, analysing and interpreting data on AMR and AM consumption/use strengthened.

- FAO organized AMR Surveillance annual review and experiences sharing workshop and animal health and food safety laboratories Mentorship Manual finalization workshops, for 24 participants (3 females) experts, 11 to 13 December 2023, Addis Ababa.
- FAO provided AMR surveillance system, laboratories capacity building and antimicrobial sensitivity testing (AST) discs, media, reagents and supplies, to AHI, APIQTC, and National Veterinary Institute (NVI) and subnational Animal Health Labs, 26 Jan 2024, link: <https://x.com/FAOEthiopia/status/1750830905109684695?s=09>

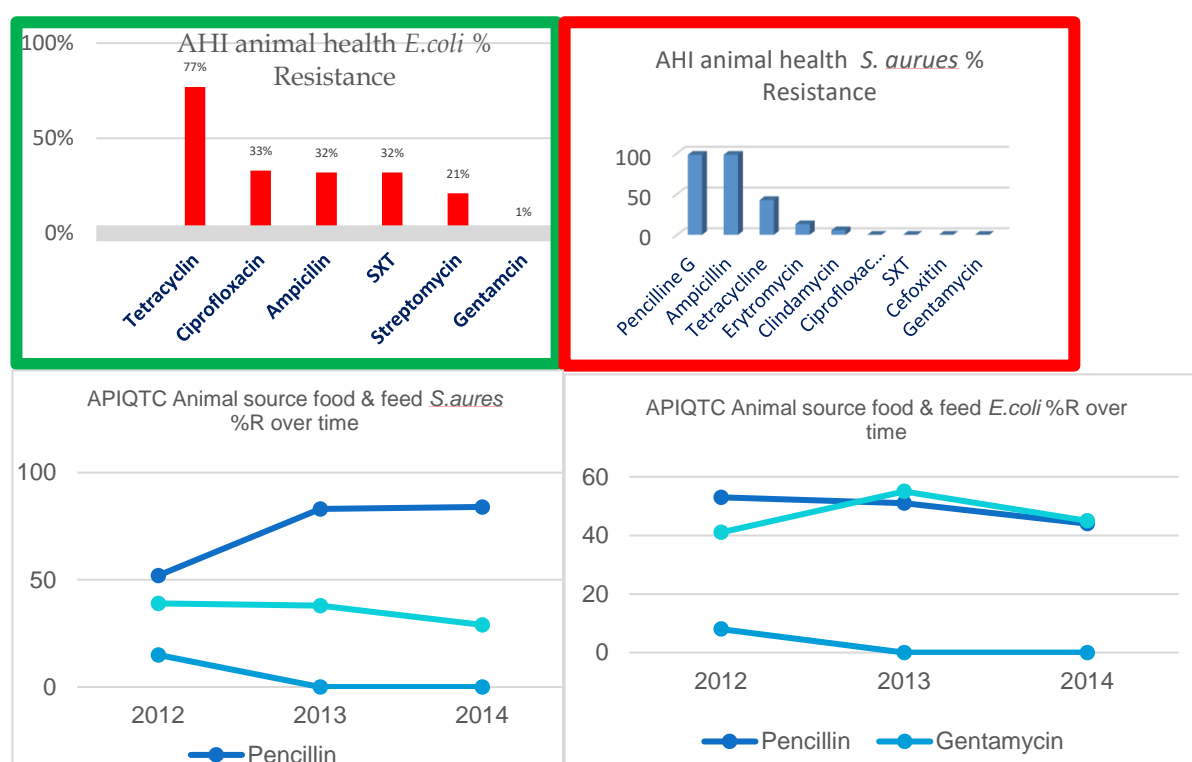


AST supplies hand-over ceremony

As a result of the continued system strengthening support, the animal health institute (AHI) has achieved the following during this reporting period:

- Advanced from Progressive Improvement Pathway (PIP) stage 2 in 2018 to PIP stage 4 in 2023, may be the first in agrifood labs in Africa. <https://www.fao.org/ethiopia/news/detail-events/en/c/1662054/>
- Awarded certificate of outstanding contribution and AMR champion during WAAW 2023
- AMR 2023 proficiency testing (PT) participated, and achievement is remarkable!
- Biobanking of more than 600 bacterial isolates archived and
- Two AMR experts have done their externship assessment of the AMR surveillance system and lab capacity in Rwanda and completed as FAO ATLASS full assessors.

Examples of the system strengthening outputs from animal health (AHI) and food safety (APIQTC) AMR surveillance reports.



Output 3: Strengthened systems for infection prevention, hygiene, biosecurity in Ethiopia.

Biosecurity, and AMU and AMR in poultry strengthened:

- Provided training to 28 poultry producers/farmers and animal health care providers on basic biosecurity, disease prevention and good farming practices, May 4 – 5, 2023 as a follow-on intervention to the identified gaps through the assessment of farm biosecurity and infection prevention measures, and AMU and AMR practices by small- to large-scale commercial poultry farmers or producers.
- Drafted National Biosecurity, AMU and AMR Management Guideline for Poultry Farm and Poultry Production Biosecurity Directive.
- Drafted poultry BCC on Reducing the need for antimicrobials in the poultry farm i.e. good animal husbandry; effective biosecurity, vaccination, and use of alternatives to antimicrobials”

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Outcome: Use of antimicrobials optimized in critical sectors

Output 4: Systems for Optimized use strengthened in critical sectors.

Safe and quality animal source food production strengthened:

- FAO supported the development and validation of Manual for Safe and Quality Production of Animal Source Foods and Control of Antimicrobial Resistance.
- FAO developed and validated Manual for Safe and Quality Production of Animal Source Foods and Control of Antimicrobial Resistance.

**MINISTRY OF AGRICULTURE
VETERINARY PUBLIC HEALTH DESK**

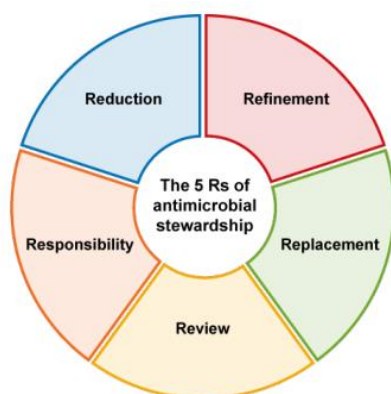
**MANUAL FOR SAFE AND QUALITY PRODUCTION OF ANIMAL SOURCE
FOODS AND CONTROL OF ANTIMICROBIAL RESISTANCE**

**Addis Ababa, Ethiopia
February 2024**

- FAO drafted a report on national epidemiologic prevalence and Post Marketing Quality Surveillance (PMQS) of substandard and falsified (SF) veterinary medicines assessment in Ethiopia.
- FAO developed Antimicrobial Stewardship in Animal Health: Training Manual for Animal Health Professionals.

ANTIMICROBIAL STEWARDSHIP IN ANIMAL HEALTH

Training Manual for Animal Health Professionals



2024

Addis Ababa, Ethiopia

- FAO provided one health antimicrobials prudent use and antimicrobial stewardship training to 36 (6 females) animal health professionals, in West Amhara Region, Bahir Dar, 2 to 5 August 2023 and SNNP region to 39(1 female), 1 to 3 Oct 2023.
- WOA and FAO organized workshop to develop methods and tools on farm level AMU and AMC data collection to 20 (3 females) participants from the agrifood sector, 26 to 28 Feb 2024.
- FAO Drafted a report on Epidemiological Survey and Post Marketing Quality Surveillance of Substandard & Falsified (SF), and Unregistered Veterinary Antimicrobials in Ethiopia.

WHO and human/public health specific implemented activities

Project progress: Highlights of project so far (This is like the Executive Summary and has most narrative)

2.0 Strengthen Sustainable National Human AMR and Consumption Surveillance

2.1 Strengthen Sustainable National Human AMR Surveillance

- WHO conducted Training on basic microbiology to 20 laboratory technologists from 10 hospitals and sentinel sites.
- WHO conducted monitoring and mentoring of the 16 AMR Surveillance sites.
- WHO distributed microbiology lab supplies to Ethiopian Public Health Institute (EPHI) sentinel sites.

Result: 16 hospitals are enrolled in National AMR Surveillance, out of which currently 14 hospitals are reporting their AMR/AST data to GLASS. As the result Ethiopian continued maintaining its membership of GLASS

2.2 Conducted Antimicrobial Consumption surveillance/survey

2.2.1 National Antimicrobial Consumption survey

- Conducted second round national antimicrobial consumption surveillance/survey imported and locally manufactured data over two years (2020-2022) period and submitted the data to WHO-GLASS

Result: Ethiopia has continued to be as a member of GLASS on Antimicrobial Consumption

2.2.2. Establish hospital antimicrobial consumption surveillance.

- Conducted Training on Antimicrobial consumption surveillance (both theory and practical) for 30 pharmacists from 13 hospitals and health bureaus from 15-16 May 2023 in Bishoftu
- Supported 13 hospitals to conduct kick off Antimicrobial Consumption Surveillance using two years (2021-2022) data of antimicrobials distributed from pharmacy store to different unit of each hospital from 17 to 30 May 2023

Result: The training and kick off AMC surveillance capacitated the hospitals to conduct AMC surveillance and report such data to their respective health bureau(s).

3.3 Scaled up Integrated and Antimicrobials Stewardship (AMS) and Healthcare Associated Infections and Prevention and Control (HAI P & C) program in hospitals.

- Conducted advocacy workshop on integrated AMS and HAI Prevention and Control Programs for management: medical director, chief executive officer, of 13 hospitals to be enrolled in the programs along with mix of trainees below.
- Provided Training on Integrated AMS and HAI Prevention and Control Program for 60 multidisciplinary professionals (physicians, pharmacists, laboratory technologists, and IPC focal persons from each hospital) from 13 hospitals, 17 to 24 Jan 2023, in Adama, and 4-7 April 2023 in Bishoftu.
- Conducted monitoring and supportive supervision on the hospitals enrolled in integrated AMS and HCAI Prevention and Control Program by Regional Health Bureaus.

Result: The advocacy workshop, and training on integrated AMS and HAI Prevention and Control and the supportive supervision have enabled the hospitals to implement major Integrated AMS activities. Some hospitals have categorized antimicrobial into Access, Watch, and Reserve (AWaRe) and launched implementing persuasive and restrictive measures in prescribing Watch and reserve antibiotics. **Example:** Yekatit 12 Hospital has developed and implemented special prescription paper for prescribing of reserve antibiotic.

Some hospitals have developed antibiogram and use the Antibiogram to guide prescribing practices of antimicrobials. **Example** Zewditu Hospital has developed and started implementing antibiogram to guide prescribing.

3.2 Capacitated national regulatory system: Ethiopian Food and Drug Authority (EFDA) in regulation AMs

- Supported EFDA to conduct survey of Substandard and Falsified (SF) human medicines with focus of antimicrobials using WHO APW consultant. Established Technical Working (TWG), recruited APW Consultants, The Consultant with engagement of TWG from EFDA and WHO developed protocol and data collection tools, and provided training of data collectors. Collected sample tracer medicines from formal and informal market, conducted verification of collected samples against EFDA registration documents, pre-import permit and records and port clearance permit. Then conducted Quality Control lab testing on 10% of suspected SF products and selected products. SF Survey report prepared, validated through workshop, and submitted to WHO and EFDA.

Result: Survey Report of substandard and falsified medicines with a focus on antimicrobials submitted to WHO and EFDA. The SF Survey process has been undertaken with active engagement and thus enhanced the capacity of EFDA in undertaking of similar survey.

WOAH specific activities implemented during the reporting period.

Project progress: Highlights of project so far (This is like the Executive Summary and has most narrative)

- WOAHA recruited a second consultant that supported the development and completion of a One Health AMR communication and stakeholder engagement strategy for Ethiopia. This was facilitated by a lead consultant hired under the AMR-MPTF project after the first one defaulted. The document has undergone peer review and is awaiting endorsement from the Ethiopian Government ministries of Health, Agriculture and Environment before it can be printed.
- Following the completion of the development of the One Health AMR communication and stakeholder engagement strategy for Ethiopia, a workshop for stakeholder review and validation of the document that was held from 11-14 December 2023.
- A planned follow-up AMR and AMU advocacy event to increase awareness on AMR risks and mitigation measures for AMR was organized for Veterinarians, veterinary paraprofessionals, and farmers on the 18-19 of December 2023.

Main challenges

What have been the main challenges confronted in delivering the project and how did you address these?

Security situation and travel restrictions in some parts of the country delayed some of the activities.

The long time taken than anticipated for the completion of the One health AMR communication and stakeholder engagement strategy due to the extensive stakeholder consultations that had to be undertaken. Regardless of the time taken, the result from the stakeholder consultations provided the much-needed input that enriched the document and enhanced all sectors ownership for the process and content developed.

Follow-up through the AMR sector focal points to have the Communication Strategy document to get endorsement and signed by the ministries leadership from Health, Agriculture, and Environment has taken longer than expected and we hope that it will be done soon to facilitate the printing of the document.

Identification and engagement of relevant facilitators for the AMR testing training of Trainers event for the veterinary laboratories (TOT) involved fact finding sessions from different institutions. A lack of clear declaration of commitment and prioritization of the training from some identified institutions delayed implementation of the activity. There has been continued follow-up consultations to engage institutions with facilities that can provide the training and now, potential headway is being realized.

What has been the impact of these challenges on project delivery?

- Use of alternatives options

- Completion of the One health AMR communication and stakeholder engagement strategy document was delayed by one year as a second consultant had to be hired following the non-responsiveness and disappearance into thin air of the initial consultant that started the work on this activity.
- Delayed in implementation of some of the activities.

Learning Innovation:

- The government has cost shared some of the activities during implementation.
- Synergy among the different AMR projects in the country.
- The health system strengthening support has shown bearing fruits in institutions.

Stakeholder engagement and resource mobilization:

- There is continued commitment of the Ethiopian government despite competing priorities in the implementation of the five years one health AMR prevention and containment strategy despite the fact that there are competitive priorities of the government due to security, draught, and damaged health facilities. This can be attested through the cost sharing of some of the activities.

Is there evidence that the MPTF grant is catalyzing a broader engagement of stakeholders and / or additional investment in addressing AMR (in particular government):

- It is known that other projects played a catalytic role in the development of the AMR MPTF project and this in return has played a key role in the addition of other AMR projects.

Review of progress against log frame

Log frame outputs and activities

% progress against indicator: Based on time, budget and activities underway/completed Categories: 0% 1-25%; 25-50%; 50-75%; 75%-99% 100%			
MPTF Output	Indicators	Progress description (activities started/completed)	Indicator % met
Improved country capacity in designing and implementing AMR related policy frameworks, investment plans, and program	Develop AMR prevention and containment strategy/ NAP framework with monitoring and evaluation, and costing	<ul style="list-style-type: none"> • AMR Prevention and Containment Strategic Plan with M & E and costing (2021 to 2025) officially launched in November 2021. • AMR MPTF project was technically and officially launched on 13 July and 18 November, respectively. • One Health AMR Prevention and Containment Advisory committee and Technical Working Groups (TWGs) established. • World Antimicrobial Awareness Week (WAAW) 2022 and 2023 organized. A report on the later compiled and shared. • Drafted the Governance Framework for Antimicrobial Resistance Prevention and Containment, 2024. • Assessed the Monitoring and Evaluation Capacities of the Antimicrobial Resistance (AMR) National Action Plan for Ethiopia” reported. • Developed OH AMR communication and stakeholders’ engagement strategy. • Capacity developed for national stakeholders on M & E framework and KPIs. • Cascaded implementation of the AMR strategy. • PMP assessed the AMR strategy and has progressed well. • AMR MPTF lesson learned workshop organized. 	100%
	Operational plan for implementing the updated NAP with the associated budget. (Number of federal, regional and/or city administrations, institutions incorporate AMR prevention and containment strategic elements in their annual plans)	<ul style="list-style-type: none"> • Sector Specific operational plan developed and launched for the three sectors (human and animal health and Environment) • Strategic AMR elements have been included in the human Health Sector Transformation Plan. • Awareness Raising Training Workshop on Infection Prevention, Biosecurity, Safe Food Production and AMR provided to Addis Ababa city administration animal health office. 	75-99%
Systems for generating, analyzing and interpreting data on AMR and AMC/AMU strengthened.	Indicator 2.1. Report on AMC and AMU	<ul style="list-style-type: none"> • AMC/AMU data/information in humans collected, reported and submitted to EFDA regulatory authorities. Two round AMC data in humans collected, submitted to GLASS and report generated and 	75-99%

		<p>submitted to EFDA and WHO. Ethiopian is a member of GLASS</p> <ul style="list-style-type: none"> • Awareness and Understanding (KAP) of Animals Owners on Antimicrobials Use and Resistance and one on Veterinarians produced. 	
	<p>Percentage of laboratories with capacity to perform AST</p> <p>Number of experts trained on AST and AMR surveillance. (Integrated with output on IPC activities)</p>	<ul style="list-style-type: none"> • Developed AMR data capture and compilation tool and being field tested. • Held an Integrated AMR Surveillance (detection, isolation, identification and AST) plan implementation annual review and experiences sharing workshop for 2022 and 2023 • Provided practical and theoretical capacity development training on AMR surveillance, and isolation, identification, antimicrobial susceptibility testing (AST), bacterial preservation, epidemiological approaches for AMR surveillance and data management provided to 27 animal health, public health, food safety and quality, public health institute zoonotic diseases, environment, conformity assessment center, and academia laboratories. • Produce a technical report on AMR Surveillance and Antimicrobials Sensitivity Testing in Ethiopian for the Agriculture sector. • Provided catalytic microbiology antimicrobial susceptibility testing (AST) supplies for human and animal health laboratories consumables: antimicrobials discs. • Handover note for the procured AST/AMR supplies. Selected with specifications, and quantified AST supplies for both human and animal health, and food safety labs • Training on basic microbiology is provided to 13 medical laboratory technologists from hospitals and sentinel sites. • Baseline assessment of basic microbiology and AST in 20 hospitals has been undertaken. Preparing to provide training of laboratory technologists. • Situation Analysis of Antimicrobial Use and Resistance in Ethiopia: One Health Approach drafted. • Assessed the AMR surveillance system progressed to PIP 3 and AHI PIP 4. AHI awarded certificate of outstanding contribution and AMR champion during WAAW 2023. 	75-99%

Strengthened systems for infection prevention, hygiene, biosecurity in Ethiopia	3.1. IPC and biosecurity and good practices guidelines developed and/or disseminated	<ul style="list-style-type: none"> Developed and validated “Status of Biosecurity & infection prevention; and antimicrobial use (AMU) & AMR in Commercial Chicken Farms in Ethiopia” report. Drafted directive on Biosecurity, AMU and AMR Management Guideline for Poultry Farm and Poultry Production Biosecurity. Drafted poultry behavior change communication (BCC) on Reducing the need for antimicrobials in the poultry farm practices in Amharic language (<i>ፀረ-ተሕዋስያን አጠቃቀም እና ፀረ-ተሕዋስያን መድሃኒቶች በጀርሞች መለመድ ላይ ያተኮረ የግንዛቤ ማስጨበጫ</i>) to farmers and animal health care providers. Status of Biosecurity and AMU and AMR (Assessment of Knowledge, Attitude, Practices of poultry owners) in small to medium-scale commercial poultry farms” assessed. 	75-99%
	Number of trained professionals on IPC and biosecurity (integrated with output on AMS activities)	<ul style="list-style-type: none"> Twenty-eight poultry producers/farmers and animal health care providers trained on basic biosecurity, disease prevention, AMU and AMR, and good farming practices as a follow on to the baseline assessment. Training Workshop organized on Biosecurity, Vaccines Use AMU, AMR, and Alternatives and Complementary approaches to AMs organized to 27 MOA, EAA, AHI, NVI, regional agriculture bureaus, private experts. 	75-99%
Systems for optimized use of antimicrobials strengthened in critical sectors.	Assessment report on substandard and falsified (SF) antimicrobials. (Number of tracer antimicrobials Post Market Surveillance (PMS) conducted)	<ul style="list-style-type: none"> National Survey of Substandard antimicrobial conducted: Consultant recruited, and technical working group established, protocol and data collection tool developed, training of data collectors provided, samples of trace medicines collected as per the protocol from formal and informal market. Collected samples verified against EFDA registration, pre-import, and port clearance documents. 10% of suspected samples subjected to Quality Control Tests. SF Survey report prepared and validated through workshop. The report submitted to EFDA and WHO. These efforts enhanced the capacity of EFDA. An epidemiologic survey and post marketing quality surveillance of substandard and falsified (SF) veterinary medicines report drafted. Laboratory post marketing surveillance (PMQS) of samples of medicines as per the protocol on selected and suspected products conducted. Drafted a report on the assessment of SF medicines in humans. 	75-99%

		<ul style="list-style-type: none"> • Draft report presented and discussed by TWG and management of EFDA. • Final draft guideline safe and quality production of primary animal source food and control of AMR developed. • Consultative workshop to re-review, finalize the safe and quality production of primary animal source food and control of AMR organized. 	
	<p>Number of hospitals implementing integrated (HAI, AMR surveillance and AMS)</p> <p>(Number of HCPs who are provided with capacity development training on AMS.)</p>	<ul style="list-style-type: none"> • Baseline assessment on 20 hospitals to be enrolled in implementation of integrated AMS and HAI Prevention and Control undertaken. • Conducted Advocacy workshop on integrated AMS and HAI prevention and control for Chief Executive Officers and Medical Directors of hospitals. • Provided Training on Integrated AMS and HAI Prevention and Control to mix professionals (Physician, pharmacist, laboratory technologist and IPC focal person per a hospital) 20 hospitals. • Monitoring and supportive supervision conducted on the trained hospitals to ensure implementation of AMS and HAI prevention and control activities. • Baseline assessment on integrated AMS and HAI Prevention and Control in 20 hospitals undertaken. • Training on Integrated AMS and HAI Prevention to multidisciplinary team from 7 hospitals provided 	75-99%
	Number of animal healthcare providers trained on AMU and AMR	<ul style="list-style-type: none"> • Advocacy and awareness raising on antimicrobial use (AMU) and antimicrobial resistance (AMR), and Safe Food Production training organized to 41 mass media and public relation experts. And these media outlets have broadcasted news and advocacy articles in their respective outlets. • Awareness raising on AMU and AMR training workshop was done at a workshop for experts in November. Preparations for AMU assessment and AMR mapping are underway. 	50-75%
	Indicator 4.1: Number of HCPs who are provided with capacity development trainings on antimicrobial stewardship	<ul style="list-style-type: none"> • Developed and validated Manual for Safe and Quality Production of Animal Source Foods and Control of Antimicrobial Resistance. • Provided training Safe and Quality Primary Animal Source Food Production with Consideration of AMU, AMR, and Withdrawal Times and Maximum 	50-75%

		<p>Residues Limits training organized to 40 Animal Health Professionals.</p> <ul style="list-style-type: none"> • Developed Antimicrobial Stewardship Training Manual for Animal Health Professionals. • Provided one health antimicrobials prudent use and antimicrobial stewardship training to 75 (7 female) animal health professionals, in West Amhara Region and SNNP regions. • Organized workshop to develop methods and tools on farm level AMU and AMC data collection to 20 (3 females) participants from the agrifood sector. • The first of its kind, One Health on Antimicrobial Stewardship (AMS) training organized to 19 animal health care professionals. 	
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Risk matrix

Risk description	Risk Category: Contextual Programmatic Institutional	Worst case consequence for the project			Mitigating action	Action owner
			Impact	Likelihood		
Current security situation in some part of the country may limit travel restriction that may delay implementation of the AMR MPTF project in the areas affected	Contextual	May delay the implementation of some activities in the areas affected.	High	Moderate	<ul style="list-style-type: none"> Implementation of the activities here there is no travel restriction. 	The federal government and all AMR MPTF stakeholders will plan ahead
Restructuring of some government office and turnover of staff may delay some of the activities of the AMR MPTF project. So we continued engaging with individual experts as a replacement and exchanges of notes and updates	Institutional	Delay in implementation	Moderate	Low	<ul style="list-style-type: none"> Support ownership and sustainability in the system. Regular replacement, refresher and exchanges of notes and updates Consultation and continued engagement with focal points Turnover of government staff who are implementing the AMR MPTF project was not that high but restructuring of some institutions. 	All stakeholders implementing AMR MPTF
Ethiopia is a big country and AMR is high in the agenda. Probability of not accessing some parts of the country.	Institutional	Inadequate coverage.	Low	Low	This could be an opportunity for project implementation. Agree on prioritization of activities. Success and evidence will guide support decisions and linkage with development partners. Ethiopia has some experiences in the implementation of AMR.	Ethiopian AMR MPTF stakeholders
Government and private human and animal health institutions including laboratories may be damaged that may affect implementation	Institutional	Delay in implementation	High	High	Support by the tripartite agencies the maximum they can be appreciated to contribute to revitalize these institutions	Government, Tripartite, development partners.