

The Antimicrobial Resistance (AMR) MULTI-PARTNER TRUST FUND

Combatting the rising global threat of AMR through a One Health Approach

Country Proposal Submission TEMPLATE

Full proposal overview

Country	<i>PERU</i>
Project title	AMR MPTF: Fighting Antimicrobial Resistance in Peru under the One Health approach
Implementing entities	FAO, WHO/PAHO, OIE
Timeframe	<i>24 months: April 2021 – March 2023</i>
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Other Implementing Partners	<ul style="list-style-type: none"> • Permanent Multisectoral Commission to face the fight against Antimicrobial Resistance • In coordination with SENASA (National Agrarian Health Service), Ministry of Agrarian Development and Irrigation- MIDAGRI; INS (National Institute of Health), Ministry of Health, MINSa; SANIPES (National Fisheries Health Service) and Ministry of the Environment (MINAM).
Budget	
<i>Total amount (USD) based on budget summary in Annex</i>	<i>USD 999,709.00</i>
<i>Total amount (USD) allocated to each Tripartite partner</i>	<i>FAO: USD 451,592</i> <i>WHO: USD 262,811</i> <i>OIE: USD 285,306</i>

Background	<p>National AMR situation</p> <p>In Peru, the initiatives carried out to confront antimicrobial resistance (AMR) for more than two decades were developed from the human health sector and had not been designed with a comprehensive or multisectoral approach that reflects the involvement of the health risks from the interrelation of human, animal, plant and environmental ecosystems, which require alliances between the different critical sectors, under the "One Health" approach.</p> <p>The situational study of AMR and antimicrobial use (AMU) has shown the increasing resistance to antimicrobials and the expansion of resistant clones among the environmental, animal and human microbiomes; therefore, constant surveillance and monitoring of AMR and AMU are essential in Peru.</p> <p>In humans, antibiotic resistance in microorganisms causing community and hospital infections in Peru has been reported to be increasing. The most worrying example is the increase in resistance of Gram-negative bacilli to carbapenems and their dissemination in various hospitals, especially in intensive care units, currently overloaded by patients affected by COVID-19.</p> <p>In animal health there have been no tests nor research associated with AMR / AMU. However, the prohibition of colistin in veterinary use has been a great advance by the Ministry of Agrarian Development and Irrigation (MIDAGRI, previously called the Ministry of Agriculture and Irrigation - MINAGRI). In addition, organizations such as the National Agrarian Health Service (SENASA) Specialized Technical Public Agency attached to MIDAGRI and the National Fisheries Health Service (SANIPES), an agency attached to the Ministry of Production (PRODUCE), among others, are participating in the implementation of the National Antimicrobial Resistance Plan (hereinafter NAP-AMR).</p> <p>In research issues related to AMR, there are scientific publications from academia related to the discovery of AMR bacteria in meat production animals for human consumption, in meat for sale in sales centers and in animals slaughtered in slaughterhouses. The bacteria of greatest interest addressed by researchers in foods of livestock origin are <i>Escherichia coli</i>, <i>Salmonella enterica</i>, <i>Campylobacter</i> spp., and <i>Vibrio</i> spp.</p> <p>SENASA, in regards to risk reduction of AMR/AMU in animal health, issued Directorial Resolution No. 0093-2015 MINAGRI-SENASA-DIAIA that includes practical recommendations aimed at improving animal health and welfare, preventing and reducing the propagation of bacteria resistant to pharmacological agents in animals and humans, to guarantee their rational use, with a view to optimizing their efficacy and safety; and protect consumer health by guaranteeing the safety of foods of animal origin in relation to pharmacological residues.</p> <p>In relation to food safety associated with AMR, Resolution No. 372 - 2016- MINSa, approves the Sanitary Technical Standard 120-MINSa / DIGESA, Sanitary Standard that establishes the Maximum Residue Limits (MRL) of veterinary drugs in foods for human consumption.</p> <p>No studies have been found on the economic impact or costs that AMR represents for the country in the review of the scientific literature.</p> <p>National response and value chain in the National Action Plan (NAP) for AMR</p> <p>In Peru, a series of efforts and initiatives were developed to confront antimicrobial resistance mainly in human health, among them, the preparation, approval and implementation of directives and protocols in different aspects: epidemiological surveillance, microbiological, serological and molecular diagnosis, monitoring the use of antimicrobials, in addition to some related institutional research, prior to</p>
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the elaboration of the Multisectoral Plan. The approval of this Multisectoral Plan to confront AMR was carried out through Supreme Decree No. 10-2019-SA of May 17, 2019, which in its second article created the “Permanent Multisectoral Commission to face antimicrobial resistance in Peru” (CMS).

The approval of the NAP-AMR and the creation of the CMS have allowed institutions and organizations at the level of the ministries to participate in the making of agreements in the implementation of the NAP-AMR and of actions that result from international cooperation projects. One limitation for the implementation and execution of the NAP-AMR is that the responsible entities still do not have financing from the public treasury / State. Therefore, it is necessary to go to funding sources from international cooperation.

Main achievements to date to control AMR in the country

In light of the evidence, significant achievements are currently being recognized in addressing the AMR / AMU problem in a multisectoral manner, but there are still significant gaps in critical sectors, more noticeable in animal health, the food chain and the environment. The CMS Annual Report 2019 describes the follow-up of the actions and activities of the Operational Plan, carried out in accordance with the five strategic objectives of the NAP-AMR and reaches the following conclusions:

- *“Antimicrobial Awareness Week was organized and carried out for the first time in Peru, in addition to the development and implementation of a Multisectoral Plan for Communication of the risk of antimicrobial resistance.”*
- *“In 2019, Peru enrolled in the Global Antimicrobial Resistance Surveillance System of the World Health Organization (GLASS), began implementation of the Integrated Surveillance System for Antimicrobial Resistance in 4 pilot hospitals and started the process of evaluating potential pilot hospitals in other regions of the country.”*
- *“Multisectoral participation has been increasing, with opportunities for improvement with the environmental sector. The technical assistance that the United Nations Environment Agency can provide is recommended.”*
- *“Opportunities for improvement are observed in the implementation of strategic interventions in objective 5 of the Multisectoral Plan, which refers to “Prepare economic arguments that favor increased investment in new drugs, diagnostic tools, vaccines and other interventions.”*

It is necessary to indicate that there are still risks and gaps that require attention in the shortest term, mainly in human and animal health. In particular, self-medication with antibiotics for restricted use in human health, the unrestricted sale of antibiotics for use in production animals and the sale of adulterated products. In the Roadmap developed by the FAO Integrated Regional Project (TCP / RLA / 3708 and OSRO / GLO / 812 / NOR), national entities identified the priority risks and gaps for the production of terrestrial and aquatic animals, as well as mitigation measures for its containment in the short, medium and long term.

Relationship of the NAP-AMR with national plans, normative and strategic instruments

According to the provisions of Supreme Decree No. 010-2019-SA, the NAP-AMR is developed considering the risk to public health that increases resistance to antimicrobials, as well as the international agreements and commitments assumed by Peru at the World Health Assembly. The Ministry of Health, through the National Institute of Health, coordinated with different entities and institutions for the preparation of the NAP-AMR.

Complementarily, for the implementation and execution of the NAP-AMR it was necessary to create the CMS under the Ministry of Health, on the basis of numeral 3 of article 38 of Law No. 29158, Organic Law of the Executive Power,

Such Law establishes that permanent multisectoral commissions of the Executive Power are created for specific purposes to fulfill functions of monitoring, oversight or issuance of technical reports and are formally created by Supreme Decree endorsed by the President of the Council of Ministers and the heads of the sectors involved.

Summary of ongoing or recently completed AMR efforts and national and international actors involved.

In 2020 and overcoming the state of emergency due to the COVID-19 pandemic, the CMS continued with virtual coordination meetings with the working groups responsible for the activities and actions of the NAP-AMR strategic plan. Currently it is in the process of reviewing the implementation report for 2020, which will be presented to the Presidency of the Council of Ministers.

From February to November, Peru participated in several events organized by international cooperation and also carried out national actions, among them:

- Surveillance, prevention and control of antimicrobial resistance in Peru (WEB INS AMR, obtained on 12.04.2020)
- Series of online seminars: Role of molecular biology in comprehensive surveillance of AMR within the framework of One Health (Tripartite)
- Course: Investigation and control of IAAS outbreaks by resistant microorganisms in the context of the COVID-19 pandemic (PAHO)
- World Antimicrobial Awareness Week 2020 (CMS)
- Formulation of the Pilot Plan for Integrated Surveillance 2020-2021 with the participation of INS / SENASA / SANIPES / DIGESA.

In addition to the efforts described, the specific projects on AMR from the three Tripartite organizations financed by FAO, KOICA and by the European Union since 2016 are added, which are mentioned further in this proposal.

Support of the Tripartite organizations to the AMR work, carried out and in progress

The Organizations that comprise the Tripartite in the Americas have a long history of collaborative work in AMR under One Health.

To date, the three Organizations have been working in Peru, within the Project financed by the European Union UNJP / SLS / 001 / EC "Working together to combat antimicrobial resistance (AMR)", with the One Health approach, for a period of 3 years. The current project, proposed to the MPTF, will develop specific and complementary lines of support.

- WHO launched the Global Antimicrobial Resistance Surveillance System (GLASS) in 2015 with the aim of continuing to fill knowledge gaps and guide strategies at all level. Peru entered the GLASS System in 2019. The purpose of the KOICA Project is to build the country's surveillance capacities to participate in GLASS.
- FAO has incorporated containment activities to AMR / AMU in the Country Programming Framework (MPP 2018-2021), Government Priority N ° 4: "Sustainable food system and access to safe and nutritious food, preferably for the most vulnerable population", Realization 4.2. Likewise, AMR actions are included in the 2020-2021 Work Plan, Result 6.
- The OIE has considered actions in the field of antimicrobial resistance as part of the Sixth Strategic Plan of the OIE, under strategic objective 1: "Guarantee animal health and welfare through adequate risk

management", continuing in the Seventh Strategic Plan, soon to be adopted. The OIE Regional Representation for the Americas has AMR work among its regional priorities.

At present, the three Organizations are participating in the development of this proposal together with the CMS and will contribute to maintain the integrity of the actions in charge of the bodies responsible for the AMR MPTF Project, through permanent communication and monitoring. Additionally, these agencies provide technical assistance with their local, regional or global technical resources.

Summary of the linkage strategy with the Tripartite Program

Below is a summary of the linkage strategy with the Tripartite Program

- Aligned with the NAP AMR, whose strategic objectives are the same as the Global Action Plan for AMR, the AMR MPTF project will maintain that alignment and will be complemented with actions from the UNJP / SLS / 001 / EC project, from the AMR KOICA project and will also use the results and progress of the FAO integrated project (TCP/ RLA/ 3708 and OSRO / GLO / 812 / NOR).
- The project UNJP/SLS/001/EC, of tripartite collaboration (PAHO, FAO, OIE) has a duration of three years, extensive to seven countries in the Americas. In Peru, the following activities will be carried out for an estimated amount of USD 100,000/year:
 - Mapping and characterization of critical groups (farmers, veterinarians, food sectors, manufacturers and sellers of pharmaceutical products, investors and development partners, civil society, academia and others).
 - Identification and comparison of antimicrobials of human medical importance used in animal and plant health,
 - Situational analysis of AMR in animal and environmental sectors.
 - Preparation of protocols and legal acts for the implementation of an integrated surveillance system for AMR under the "One Health" approach.
 - Development of a pilot for the implementation of the integrated surveillance of AMR, under the "One Health" approach.
- The project financed by the Korean Agency for International Cooperation (KOICA), in execution for 3 years "Strengthening of Global and National Surveillance Systems, through the improvement of national laboratory capacities and human resources for surveillance of the antimicrobial resistance (AMR)" is led by WHO / PAHO and focuses on addressing AMR only in human health.

AMR in the United Nations Framework for Cooperation for Sustainable Development

Currently, AMR has not been explicitly included in the United Nations Sustainable Development Cooperation Framework (UNSDCF); However, FAO has informed the Office of the Resident Coordinator in Peru (OCR), the relevance of considering the One Health approach in the inter-agency activities that are carried out, beginning with the inclusion of the AMR project UNJP / SLS / 001 / EC, within the framework of the office of the Resident Coordinator (OCR) of the United Nations System in Peru. The OCR is currently leading the development of

	<p>the UNSDCF 2022-2026 Cooperation Framework, which will include AMR / AMU actions of the MPTF.</p> <p>This project will contribute to Sustainable Development Goals 1, 2, 3, 8, 11 and 17 of the 2030 Sustainable Development Agenda.</p> <p>Brief summary of other actors in activities related to AMR in the country</p> <p>The AMR MPTF Project is linked to actors from other projects in progress or in the process of elaboration, to enhance its objectives in a complementary way. The risk of repeating activities will be avoided by maintaining close communication and collaboration between the agencies and CMS. These projects are:</p> <ul style="list-style-type: none"> • <i>“Working together to fight antimicrobial resistance”</i>, a Tripartite collaboration project (PAHO, FAO, OIE) financed by the European Union and with a duration of three years, with the participation of seven countries in South America. In Peru, activities to be conducted include: the mapping and characterization of critical groups, to identify and compare antimicrobials of human medical importance used in animal and plant health with technical support from the Tripartite, to develop protocols and legal acts for the implementation of an integrated surveillance system for AMR under the One Health approach and the development of a pilot for the implementation of integrated surveillance, with the same approach. • <i>“Strengthening Global and National Surveillance Systems, through the improvement of national laboratory capacities and human resources for the surveillance of antimicrobial resistance (AMR)”</i>, funded by the Korean Agency for International Cooperation (KOICA), implemented by WHO / PAHO with the government of Peru. • Within the framework of the FAO Action Plan on Antimicrobial Resistance (2016-2020), the Integrated Regional Project on Antimicrobial Resistance (TCP / RLA / 3708 and OSRO / GLO / 812 / NOR). Among the results of the Roadmap proposed by this project, there is an analysis of critical actors, including those from the private sector, as well as the state of governance and regulations related to AMR. • The AMR MPTF project has included among its key activities the “Identification and implementation of strategies for the involvement of priority critical groups in policies and plans against AMR” that will allow, in part, to reduce this gap; enabling the inclusion of associations of producers of terrestrial and aquatic animals, teams of university researchers in AMR / AMU, medical and veterinary pharmaceutical industry, producers and importers of animal feed, associations of professionals specializing in animal health, food safety and environmental health and communicators, among other critical multisectoral groups.
<p>Status of the National Action Plan for AMR</p>	<p>Development of the NAP-AMR</p> <p>The NAP-AMR approved by Supreme Decree No. 10-2019-SA of May 17, 2019, in its second article created the permanent Multisectoral Commission (CMS). The CMS is chaired by a representative of the Vice Minister of Public Health and has a technical secretariat in charge of a representative from the National Institute of Health. The CMS is made up of representatives from the sectors of human health, terrestrial and aquatic animal health, plant health, food production, food safety and the environment, represented by the following institutions: Ministry of Health</p>

(MINSA), through the National Institute of Health (INS); Ministry of Agrarian Development and Irrigation (MIDAGRI), through the National Agrarian Health Service (SENASA); Ministry of Production (PRODUCE), through the National Fisheries Health Service (SANIPES), Ministry of Defense, Ministry of the Interior, Ministry of the Environment, Ministry of Foreign Relations. The CMS representatives were appointed by Ministerial Resolution of their respective ministries.

The Medical College of Peru, the Veterinary Medical College of Peru, the College of Pharmaceutical Chemists of Peru, and University research institutes participate in the CMS as guests. The CMS can invite other public and private entities, civil society, international cooperation organizations and academia, to contribute to the advice and technical support of the assigned functions.

The NAP-AMR also has a Strategic Plan, which covers a period of 3 years (from 2019 to 2021) and includes 5 strategic objectives with their respective strategic interventions; an Operational Plan and Budget; and a Follow-up and Monitoring Plan.

In the NAP-AMR, integrated surveillance is understood as responding to the One Health approach (integration of aspects of human health, animal health, environmental health, agriculture and food products), as well as the integration of clinical, epidemiological and microbiological aspects. CMS works to consolidate the fight against antimicrobial resistance from different angles, integrating for that private educational institutions, professional associations and different social actors.

The Annual Execution Monitoring Report, whose objective was to describe and report to the Presidency of the Council of Ministers (PCM) the fulfillment of the actions of the AMR 2019 Operational Plan, is the latest report that accounts for the work of the CMS. To date, the 2020 Report is in the final review process.

The advance of the NAP-AMR is according to what was planned, with periodic and necessary adjustments, trying to overcome inconveniences in terms of logistical resources and, so far from March to date, for the purposes of the COVID-19 pandemic.

The CMS meetings began on May 28, 2019 and are held monthly. The last meeting, Session XIII, was held on December 10, 2020. In order to better fulfill its functions, the CMS has formed very dynamic multi-disciplinary / multi-sector working groups.

Support from the Tripartite organizations to the NAP-AMR

The Tripartite participates as an observer in the ordinary and extraordinary meetings of the CMS, and has played an important role in increasing the interaction between the members of this Commission.

From the Tripartite point of view, it was observed that the interaction during the development of the project proposal has stimulated the activities of the CMS, and it is expected that the interaction during its execution will influence institutional strengthening and internal and intersectoral coordination at the three levels of government, as well as in capacity building.

This project will provide the opportunity to initiate or strengthen relevant lines of work such as the integrated surveillance of AMR and AMU, configuring a strategic contribution that justifies the inclusion of the set of activities of the NAP in the plans and budgets of the different sectors.

Project Summary	
Impacts	<p>1.0 The country makes explicit commitments (policies, investment plans, programmes, legal frameworks, resources allocation) on AMR based on evidence and quality data.</p> <p>2.0 AMU associated behaviors and practices sustainably improved in critical sectors.</p>
Outcomes	<p>1.1 Risks and benefits of AMR reflected in national budgets and in development/multi-lateral partner sector-wide investments</p> <p>1.2 Evidence base/representative data on AMR/AMU improved for policy-makers and sectors implementing AMU practices.</p> <p>2.1 Use of antimicrobials optimized in critical sectors.</p> <p>2.2 Improved understanding of AMR risks and response options by targeted groups.</p>
Outputs and Key activities	<p>Summary of Outputs from the MPTF Results Matrix and prioritized key activities</p> <p><i>Output 1.1.1 Improved country capacities for designing and implementing AMR related policy frameworks, investment plans and programme.</i></p> <p>Activity 1.1.1.a Support the update of the AMR Multisectoral Plan, strengthening the One Health approach.</p> <p>Activity 1.1.1.b Analyze the regulatory framework on AMR in line with international standards and develop a work plan to update it.</p> <p><i>Output 1.2.1 Systems for generating, analyzing and interpreting data on resistance and consumption/use patterns developed or strengthened.</i></p> <p>Activity 1.2.1.a Analysis of installed capacity (HR, infrastructure, equipment, services and others) for the integrated surveillance of AMR, using available tools (ATLASS and other existing ones), with an emphasis on animal health, food for human consumption and environment.</p> <p>Activity 1.2.1.b Development and implementation of protocols and procedures for the integrated surveillance of AMR (human health, terrestrial and aquatic animal health, in prioritized chains), as a technical basis for the development of a normative base.</p> <p>Activity 1.2.1.c Development and implementation of protocols and procedures for the integrated surveillance of AMU (human health, terrestrial and aquatic animal health, in prioritized food chains), as a technical basis for the development of normative base.</p> <p>Activity 1.2.1.d Strengthening capacities for the microbiological diagnosis of sentinel bacteria (<i>E. coli</i>, <i>Salmonella spp.</i>, <i>Campylobacter spp.</i> and <i>Vibrio spp.</i> or others) under the One Health approach, with emphasis on prioritized food chains for strengthen integrated surveillance of AMR.</p>

	<p>Activity 1.2.1.e Diagnosis of existing computer platforms and development of a proposal for an interoperable pilot platform for the integrated surveillance of AMR and AMU.</p> <p>Activity 1.2.1.f Strengthening of capacities in the analysis and interpretation of information generated from the integrated surveillance of AMR under the One Health approach.</p> <hr/> <p>Output 2.1.1 <i>Systems for optimized use strengthened in critical sectors.</i></p> <p>Activity 2.1.1.a Preparation of a plan and early implementation of the Program for Optimizing the Use of Antimicrobials (PROA) in human health.</p> <p>Activity 2.1.1.b Preparation and implementation of two (02) guides on the responsible and prudent use of antimicrobials in animal health and agriculture.</p> <p>Output 2.2.1 <i>Improved capacity to design awareness raising, behavior change and educational activities</i></p> <p>Activity 2.2.1.a Awareness and advocacy on AMR / AMU under the One Health approach for specific prioritized groups, at the national, regional and local levels.</p> <p>Activity 2.2.1.b Advocacy and advocacy in higher education institutions, Professional Associations and Scientific Societies.</p>
<p>Link to National Action plan</p>	<p>Expected contribution to the achievement of the NAP AMR objectives</p> <p>This proposal is fully aligned with the NAP-AMR, was conceived, developed and approved under the One Health approach by the members of the CMS and the entities that comprise it. It includes activities of three of five objectives of the NAP-AMR, which will lead to joint work on:</p> <ul style="list-style-type: none"> • Improve awareness and understanding of antimicrobial resistance, through effective communication, advocacy and training. • Strengthen knowledge and the scientific base through integrated surveillance and research. • Optimal use of antimicrobials in human and animal health, pointing out actions to be carried out in other areas such as plant health and the environment. <p>The expected results imply the continuation of actions to complement the activities; as well as develop the strategic activities of the two remaining objectives of the NAP-AMR, which are:</p> <ul style="list-style-type: none"> • Reduce the incidence of infections with effective sanitation, hygiene, and infection prevention measures. • Prepare economic arguments in favor of a sustainable investment that takes into account the needs of Peru, and sustain the importance of investing in new drugs, diagnostics, vaccines and other interventions.

<p>Link to country's development priorities</p>	<p>Since 2019, Peru has a Vision for 2050, approved by consensus at the National Agreement Forum. This vision represents the aspirations of the entire population and describes a future welfare situation that the country is expected to achieve by 2050. With its approval, the Vision of Peru to 2050 conducts the continuous improvement of policies and plans that guide the actions of the State, civil society, academia, companies and cooperating organizations in order to achieve a dignified life for all people, through inclusive and sustainable development at the national level.</p> <p>Supreme Decree No. 056-2018-PCM approved the General Government Policy for 2021, which includes five priority axes and guidelines for the government for 2021. The axes are interrelated and are consistent with the country's policy and plan framework. Health aspects are contained in axes 4. Social development and well-being of the population, which includes, among others:</p> <p>4.1 Reduce childhood anemia in boys and girls from 6 to 35 months, with a focus on prevention.</p> <p>4.2 Provide quality health services, timely, with resolution capacity and with a territorial approach.</p> <p>In the Peru Pact, the Forum of the National Agreement with the institutions and agencies of the National Planning System specifies the axis "Unified health system: universal provision" which is the first of the six proposed axes of its agenda. The AMR MPTF Project is correctly aligned with national development priorities since its results and products are convergent with them.</p> <p>Additionally, it is pertinent to indicate that Peru presented its II Voluntary National Report on the implementation of the 2030 Agenda for sustainable development, called "National Report of Peru 2020: the protection of Life in the Emergency and after" before the Political Forum of United Nations High Level 2020 (HLPF, for its acronym in English), in the context of COVID-19, said Report identified as the immediate interrelated action the "Protection of life: health, food-nutrition for all"</p>
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Joint Programme Description

1 Baseline and situation analysis

1.1 Problem statement

Impact of AMR on human health

In Peru, antimicrobial resistance, in addition to putting the control of infectious diseases, such as tuberculosis, at risk, causes specific challenges both in community-acquired infections and infections associated with health care. Peru has a robust AMR surveillance system, where the information, completed by different scientific studies, has shown a significant increase in resistance to carbapenems in hospital Enterobacteriaceae, as well as a worrying spread of *E. coli*, pneumococcus and *Salmonella spp.* resistant to first-line antimicrobials. Many of these pathogens are also found in agriculture, food and the environment, underscoring the importance of integrated surveillance and decision-making accordingly. Peru has a regulatory framework for the sale of prescription antimicrobials, it has quantified the consumption of antimicrobials, finding a use of 10 DDD / 1000 inhabitants, with a predominance of the use of penicillin and beta-lactams. However, there is little information on its appropriate use in the context of antimicrobial optimized use programs.

Incipient multisectoral coordination and absence of One Health approach

The set of activities and information produced on the risks and growing gaps of AMR and inadequate AMU for more than 20 years has not been systematized to generate coherent and effective policies, plans and guidelines, in order to address the problem in an inter-and multi- sectoral manner. These risks and gaps are most evident in the terrestrial and aquatic animal health sectors, in the food chain and in the environment.

Since its creation in 2019, the CMS has conducted through its different members, various activities:

- Awareness through conferences, face-to-face and virtual workshops; instruments have been designed for the surveillance of AMR and AMU in human health,
- Formulation of a pilot for the integrated surveillance of enteropathogens,
- Training in surveillance of infections associated with human health
- Lifting of the baseline on the use of antimicrobials in human and animal health, as well as the prohibition of colistin in veterinary products.

Despite these interventions, there are still priorities to be addressed from the One Health point of view, including:

- Availability of evidence and data on priority aspects of the AMR and AMU in a multisectoral manner,
- Relevant policies for the standardization and wide implementation of integrated surveillance, in the management of AMR / AMU,
- Empowerment of governing institutions and involvement of target actors,
- Updating and / or formulation of normative instruments,
- Updating of the NAP AMR in a horizon of no less than 10 years, which guarantees the One Health approach to reduce risks and the sustainability of actions.

Identification of priority risks / gaps in terrestrial and aquatic animal health

The final reports from the Integrated Regional Project (TCP / RLA / 3708 and OSRO / GLO / 812 / NOR) present the priority risks and gaps identified in terms of AMR and AMU for terrestrial and aquatic animal production systems, which served as a basis for the formulation by the authorities of the preliminary roadmap for the strengthening of management, proposing mitigation and containment measures to be developed in the short, medium and long term. Among the most relevant are the following:

- In terrestrial animals, gaps were prioritized corresponding to the factors of bad practices in the use of antibiotics, bad production practices, food and water sources and environmental management.
- Consumption of food potentially contaminated with antibiotic residues, for which actions and solutions were indicated.
- In the case of aquatic animals, the prioritized risks were also identified related to poor production practices, the use of antibiotics, food and water sources, and environmental management.
- On cross-cutting measures described in the Sustainability section of the system, various gaps were identified corresponding to the Surveillance of the use of antimicrobials and AMR, Governance, Risk communication and Research and innovation.

Role of the Tripartite in the face of the challenges of AMR and in the sustainable application of the NAP AMR

The direct participation of the Tripartite in the development and execution of the project will give an additional impulse to the achievement of the strategic objectives of the NAP AMR, as well as contribute to its updating, as it concludes in April 2022. More precisely, the presence of the Tripartite will allow support in the execution of the NAP AMR, and will facilitate the alignment of policies to international standards, norms and guidelines, under the One Health vision.

Previous experiences and lessons learned from the execution of the NAP AMR and the cooperation projects currently being implemented (FAO, KOICA and EU) will be taken into account, in order to ensure scalability and the impacts of their results, applicable to each of the levels of government.

1.2 AMR MPTF Results Matrix

The activities outlined in this matrix have been defined to function as “initiator or trigger activities”, since there is no history of activities that cover most of the identified needs. It has been proposed that the products obtained from these activities provide an evidence and knowledge base about the situation of the AMR problem in minimally explored areas, and demonstrate the need for a greater investment to achieve the desired results which will be translated into tangible changes over time.

This knowledge base, which will be achieved with this project, will allow decision-making and the continuity of actions through national policies sustained over time and aligned with the NAP AMR.

List of outcomes and outputs adopted from the Tripartite Results Matrix

This AMR MPTF Project has selected the following Outcomes and Outputs from the AMR MPTF Matrix and designated the following specific activities:

- **Outcome 1.1: Risks and benefits of AMR reflected in national budgets and in development/multi-lateral partner sector-wide investments**

Output 1.1.1 Improved country capacities for designing and implementing AMR related policy frameworks, investment plans and programme.

- **Activity 1.1.1.a** Support the update of the AMR Multisectoral Plan, strengthening the One Health approach.
- **Activity 1.1.1.b** Analyze the regulatory framework on AMR in line with international standards and develop a work plan to update it.

- **Outcome 1.2 Evidence base/representative data on AMR/AMU improved for policy-makers and sectors implementing AMU practices**

Output 1.2.1 Systems for generating, analyzing and interpreting data on resistance and consumption/use patterns developed or strengthened.

- **Activity 1.2.1.a** Analysis of installed capacity (HR, infrastructure, equipment, services and others) for the integrated surveillance of AMR, using available tools (ATLASS and other existing ones), with an emphasis on animal health, food for human consumption and environment.
- **Activity 1.2.1.b** Development and implementation of protocols and procedures for the integrated surveillance of AMR (human health, terrestrial and aquatic animal health, in prioritized chains), as a technical basis for the development of a normative base.
- **Activity 1.2.1.c** Development and implementation of protocols and procedures for the integrated surveillance of AMU (human health, terrestrial and aquatic animal health, in prioritized food chains), as a technical basis for the development of normative base.
- **Activity 1.2.1.d** Strengthening capacities for the microbiological diagnosis of sentinel bacteria (*E. coli*, *Salmonella* spp., *Campylobacter* spp. And *Vibrio* spp. Or others) under the One Health approach, with emphasis on prioritized food chains for strengthen integrated surveillance of AMR.
- **Activity 1.2.1.e** Diagnosis of existing computer platforms and development of a proposal for an interoperable pilot platform for the integrated surveillance of AMR and AMU.
- **Activity 1.2.1.f** Strengthening of capacities in the analysis and interpretation of information generated from the integrated surveillance of AMR under the One Health approach.

- **Outcome 2.1 Use of antimicrobials optimized in critical sectors.**

Output 2.1.1 Systems for optimized use strengthened in critical sectors.

- **Activity 2.1.1a** Preparation of a plan and early implementation of the Program for Optimizing the Use of Antimicrobials (PROA) in human health.
- **Activity 2.1.1.b** Preparation and implementation of two guides on the responsible and prudent use of antimicrobials in animal health and agriculture.

<ul style="list-style-type: none"> ● Outcome 2.2 Improved understanding of AMR risks and response options by targeted groups
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Output 2.2.1 Improved capacity to design awareness raising, behaviour change and educational activities.

- **Activity 2.2.1.a** Awareness and advocacy on AMR / AMU under the One Health approach for specific prioritized groups, at the national, regional and local levels.
- **Activity 2.2.1.b** Advocacy and advocacy in higher education institutions, Professional Associations and Scientific Societies.

1.3 Stakeholder mapping and target groups

The stakeholder mapping below identifies their level of commitment to AMR at the national level in the prioritized areas of the AMR MPTF Project:

Key stakeholders	Predominant Relationship	Influence over other stakeholders
Public Sector		
● Ministry of Health (Ministerio de Salud – MINSA)	In favor	High influence
Vice Ministry of Public Health (Viceministerio de Salud Pública – VMS-MINSA)	Focal point	High influence
National Institute of Health (Instituto Nacional de Salud – INS-MINSA)	In favor	High influence
National Center for Epidemiology, Disease Prevention and Control (Centro Nacional de Epidemiología, Prevención y Control de Enfermedades)	In favor	High influence
General Directorate for Strategic Interventions in Public Health (Dirección General de Intervenciones Estratégicas en Salud Pública)	In favor	Medium influence
General Directorate of Medicines, Supplies and Drugs (Dirección General de Medicamentos, Insumos y Drogas)	In favor	Medium influence
General Directorate of Environmental Health (Dirección General de Salud Ambiental)	In favor	High influence
● Ministry of Agrarian Development and Irrigation	In favor	High influence
National Agrarian Health Service (Servicio Nacional de Sanidad Agraria – SENASA)	Focal point	High influence
● Ministry of Production	In favor	High influence
National Fisheries Health Service (Organismo Nacional de Sanidad Pesquera – SANIPES)	Focal point	High influence
● Ministry of Environment	Focal point	High influence
● Ministry of Labor – Social Health Insurance (Seguro Social de Salud, EsSalud)	In favor	Medium influence
● Ministry of Defense - Armed Forces Health Service (Sanidad de las Fuerzas Armadas)	In favor	Medium influence

Key stakeholders	Predominant Relationship	Influence over other stakeholders
<ul style="list-style-type: none"> • Ministry of the Interior – Peruvian National Police Health Service (Sanidad de la Policía Nacional del Perú) 	In favor	Medium influence
<ul style="list-style-type: none"> • Ministry of Foreign Affairs 	In favor	Medium influence
Private Sector		
Peruvian Medical Association (Colegio Médico del Perú)	In favor	High influence
Peruvian Veterinary Medical Association (Colegio Médico Veterinario del Perú)	In favor	High influence
Biologists Association (Colegio de Biólogos)	In favor	Medium influence
Faculties of Medicine, Veterinary Medicine, Chemistry-Pharmacy of several Universities (Facultades de Medicina, Veterinaria, Química-Farmacia de Universidades varias)	In favor	High influence
National Education Superintendence (Superintendencia Nacional de Educación, SUNEDU)	Indifferent	High influence
Alexander von Humboldt Institute of Tropical Medicine - Cayetano Heredia Peruvian University (Instituto de Medicina Tropical Alexander von Humboldt – Universidad Peruana Cayetano Heredia)	In favor	High influence
Institute of Tropical Medicine – San Marcos National University (Instituto de Medicina Tropical – Universidad Nacional Mayor de San Marcos)	In favor	High influence
Civil society and NGOs (Sociedad civil y ONGs)	In favor	Medium influence
Agricultural, farming and food producers' associations (Asociaciones de productores agropecuarios y de alimentos)	In favor	High influence
Social communication media (Medios de comunicación social)	In favor	High influence
General population	In favor	Medium influence

The main beneficiary of the AMR MPTF Project will be the general population, as it will allow the State to formulate plans and strategies to counteract AMR and reduce their derived risks and complications affecting human and animal health, as well as food safety and the environment.

There is a wide spectrum of benefits at the level of governing institutions under the One Health approach and related organizations, human health medical centers, veterinary services, academia, producers of terrestrial and aquatic animals, professional organizations and civil society and rural communities.

The central government, represented by the aforementioned Ministries, will have reliable evidence and data to formulate a State policy on AMR / AMU, programs, plans and national and sectoral regulatory instruments, to be applied in the governance of the integrated AMR system in the country. Regional and local governments will support the management of the integrated system and will participate in the application of regulations, guidelines and standards, in strengthening coordination / communication between sectors, and enhancing the capacity of stakeholders.

Medical professionals, veterinarians and related professions participate in the containment of AMR, through their commitment to advise the authorities on this matter, as well as provide guidance, in order to reduce AMR through prudent and rational use of antibiotics and their participation in raising awareness on their risks and impacts.

Farmers and farm owners are involved in containing AMR, because of their commitment to the prudent and responsible use of antibiotics, as prescribed by veterinarians. Civil society and non-governmental organizations participate by supporting the sensitization of communities to use antibiotics in a prudent and responsible manner.

Academia participates by including topics on AMR / AMU in their curricula, in medicine, pharmacy, veterinary medicine, animal sciences, agronomy, biology and fisheries schools. Relevant contents include infection prevention and control (IPC), AMR and the prudent and rational use of antimicrobials in all sectors, AMR / AMU research, and in raising awareness on their academic bodies.

Communities participate in the control of AMR by committing to use antimicrobials wisely and responsibly as prescribed by medical authorities. This should be done in an inclusive and collaborative process, bringing together local and Tripartite perspectives and resources.

2 Programme Strategy

2.1 Overall strategy

Summary of the joint strategies of the Tripartite MPTF

The AMR MPTF project will:

- Build a firm base of evidence and knowledge on the situation of AMR and AMU in the country, which will later be used to make appropriate policy, plan and program decisions to combat AMR and optimize AMU in the most critical sectors.
- Be the best alternative because it will take advantage of the sectoral technical capacity to channel it under the One Health approach and use the experience of interagency collaboration in the country.
- Enable and accelerate achievement of the strategic objectives of the Multisectoral Plan to confront AMR because it will finance key activities that have not yet been incorporated into sector plans and budgets.
- Serve as a tool to contain and trace the efforts of the different sectors in a direction guided by the One Health approach, avoiding the dispersion of fragmented efforts.
- In alignment with the NAP-AMR, whose strategic objectives are the same as the Global Action Plan for AMR, maintain that alignment and be complemented with actions from the KOICA Project and the Regional Tripartite Project financed by the European Union.
- Contribute with important financing of key activities of the NAP-AMR, which will be in the future, incorporated in the policies, plans and sector interventions, and their budgets.
- Once the AMR MPTF Project is completed, the CMS members will see their capacity to formulate policies and plans strengthened by having integrated information on the situation of AMR and AMU, and they will have tools to influence appropriate behavior of the population and for the training of human, animal and environmental health professionals.

2.2 Theory of Change

The situational study of AMR and antimicrobial use (AMU)¹ has shown the increasing resistance to antibiotics and the expansion of resistant clones among the environmental, animal, and human microbiomes. Hence, constant surveillance and monitoring of AMR and AMU are essential in Peru.

Even though Health authorities have made efforts in the field of AMR for a few years, the mismanagement of antimicrobials translates into resistance to antibiotics in the country's hospitals, which is increasing and with a trend of spreading throughout the country. An example of this is the resistance of Gram-negative bacilli to carbapenems and colistin and its diffusion in various hospitals, especially in intensive care units. At the user level, self-medication contributes to antimicrobial resistance. Likewise, cases such as colistin resistance as a last reserve antibiotic show evidence of its use as a growth promoter in food-animal production, despite the fact that there are regulations approved for the prohibition of its use and commercialization.

The misuse of antimicrobials and, in general, their access without a prescription (self-medication) and poor-quality or adulterated products is a major problem that leads to the development of new types of AMR and predisposes people to develop infectious diseases caused by resistant pathogens. The lack of hygienic measures in certain sectors of the population is undoubtedly another one of the main causes due to the lack of drinking water, which aggravates the situation of the spread of AMR.

Since 2014, the WHO Global Action Plan incorporates commitments as an initiative to carry out the surveillance of antimicrobial resistance and the promotion of standards to improve practices in their use. To do so, WHO develops GLASS (Global AMR Surveillance System). In 2019, Peru participates as a member country in the registry, analysis and surveillance of AMR, based on information on the record of prevalent pathogens, as well as antibiotic sensitivity and antimicrobial consumption, contributing to information at a global level.

It is also important to point out that, to date, no Government or official tests nor research have been generated in the country in the area of animal health associated with AMR / AMU. However, the minority medium and large-scale private animal food producing sector, conducts certain actions on AMR / AMU in safeguarding its commercial interests, but this information is not in the public domain nor mandatorily reported, as not required by law. In Peru, 97% of agricultural producers are family farmers, a sector where there are serious limitations in the use of antimicrobials and other associated problems.

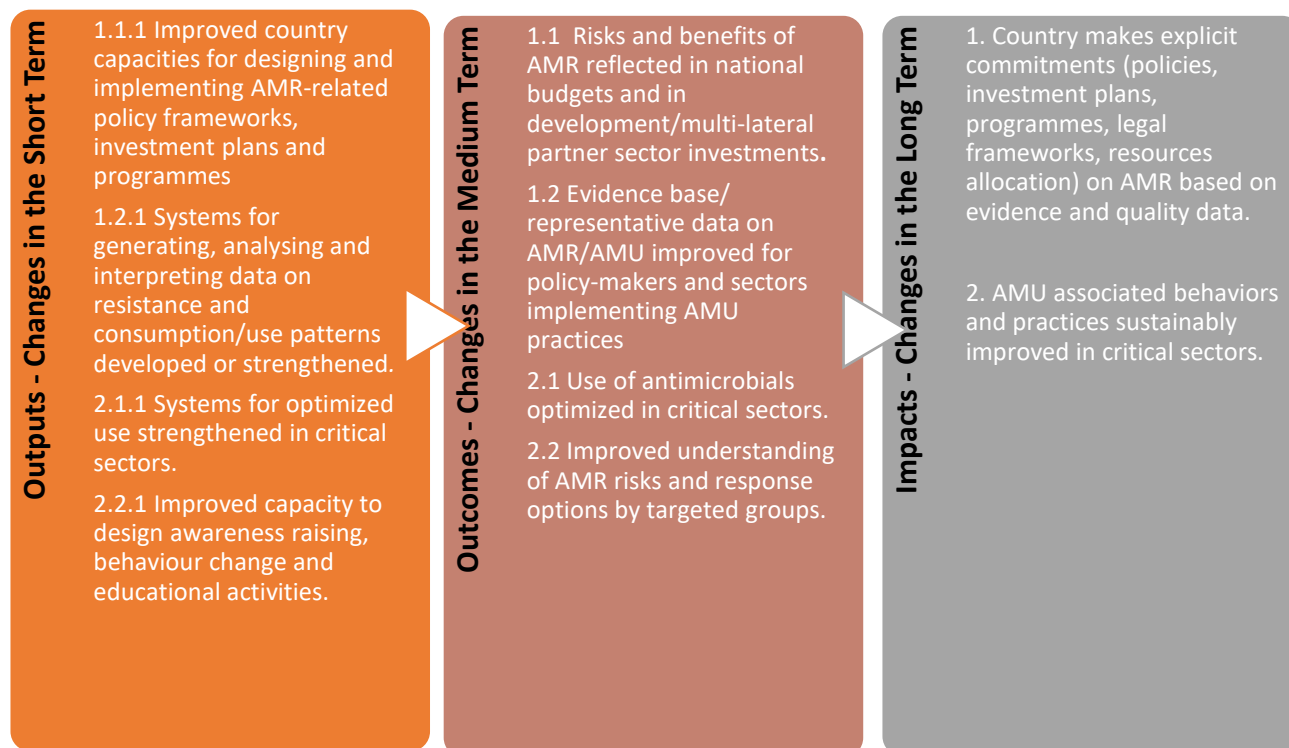
With regard to food and animals, the need to feed a growing population has led to the development of modes of production that seriously affect the health and welfare of animals, crop health and food safety. The unrestricted use of antimicrobials in growth promotion or without veterinary prescription for reducing the burden of disease in production systems, is known to lead to the development of AMR in animals and such resistance can be transferred to humans, a situation that is being addressed in the country with regulatory measures that are still limited. Actions related to AMR in environmental matters are also incipient.

Tackling this situation demands substantial changes, especially in the conduct, behavior and practices of people, since it implies sensitizing and raising awareness in decision-makers on the need to develop or adapt existing policies and implement them correctly, essentially ensuring that AMR is considered high on the political agenda. Consequently, this should lead to the allocation of State resources, to support the country with the necessary tools and appropriate to its reality. Above all, contributing to the generation of information and data through integrated surveillance systems to advance in the fight against AMR.

¹ Organización Panamericana de la Salud, © 2020. Magnitud y tendencia de la resistencia a los antimicrobianos en Latinoamérica. ReLAVRA 2014, 2015, 2016. Informe resumido. <https://www.paho.org/es/documentos/magnitud-tendencias-resistencia-antimicrobianos-latinoamerica-relavra-2014-2015-2016>

All this will constitute evidence and a basis for continuous improvement of the measures to be applied, generating awareness in the population. What has been described is to be achieved in a long-term horizon, since this project will contribute to laying the foundations for this extensive purpose, through a triggering effect in the short term, which strengthens the sustainability of the actions by the Peruvian State in the medium and long term.

The short-, medium- and long-term changes proposed are presented below.



The AMR MPTF project will strengthen management / governance, integrated surveillance, and awareness of AMR / AMU in critical sectors of Peru, under the One Health approach. These results need to be promoted in the short term, since the NAP-AMR does not yet have specific funding from national resources. Consequently, it is expected that, with the project's contribution, AMR will be prioritized on the national political agenda and, therefore, resources from the Public Treasury will be allocated. The project activities will have an impact on improving antimicrobial consumption and use practices, since it will promote behavior change in critical actors and the population.

The first result refers to the generation of information and data on the gaps and risks that AMR implies in the country, as well as the priority attention that should be assigned to AMR to reduce its effects on human, animal, food and environmental health. The generation of evidence should serve as the basis for decision-making and the allocation of resources from the Treasury and strategic partners, as the expected benefit from reducing the risks of AMR will be reflected in the reduction of burden on the State due to morbidity, in animal welfare, in food safety, as well as in improving productivity through good practices in prioritized food chains.

To date, the country has made considerable efforts to implement the NAP-AMR 2019-2021, evidencing a good coordination between actors, even though the CMS has very limited resources, and, since this plan is close to expire, the project will contribute to its updating in a medium to long term horizon. In addition, shall define further actions in the sectors of human health, animal, food, and environment, under the One Health approach, as well as the indicators to measure progress in its implementation.

The second result of the AMR MPTF project, on the optimized use of antimicrobials in the human health sector, is achieved through the implementation of the Antimicrobial Optimization Program (PROA) (Stewardship) and the application of guidelines for the responsible and adequate use for antimicrobials in terrestrial and aquatic animals. Finally, understanding among critical sectoral groups on the AMR risks and the response options is also improved, with an emphasis on the professionals training, school education, and other specific citizenship groups that are key for the purposes of tackling AMR.

The prioritized results of the AMR MPTF project will contribute to the achievement of the strategic objectives of the NAP-AMR

The AMR MPTF project, through the prioritized results as already mentioned, will strengthen the governance of the AMR/AMU in the country, as it will complement the fulfillment of three from five strategic objectives of the current National Plan, as well as provide strategic inputs for updating in a longer-term horizon. In the same manner, it will contribute to improve the key indicators of the plan to measure compliance.

Commitments undertaken by the AMR MPTF Project

The Project takes on the responsibility of delivering the results, information and systematized data, guidelines, protocols and procedures, and related strengthened capacities. Likewise, broader monitoring, follow-up, evaluation and effective communication activities will be developed. The gaps and risks that are not being covered in the framework of this project and other projects in execution, need to be supplemented by the country in future medium and long-term plans and programs, in order to contribute to the sustainability of the actions related to AMR/AMU.

In the field of institutional empowerment, awareness of the risks of AMR/AMU will be generated in the governing institutions of human health, animal health and environmental protection, through effective awareness strategies in the actors and expressions of tangible commitment to understand and promote compliance with regulatory instruments, good practices for the prevention and control of human and animal diseases, good food safety practices, and solid waste and water management. As indicated, the development of actions and planned activities on AMR surveillance and the appropriate and responsible use in human and animal infections will be put forward. Institutional empowerment is expected to be a sustained practice in the short, medium and long term over a 10-year horizon (2030).

Objectives to achieve with the resources of the MPTF partners.

The priority objective of the MPTF partners is that the outcomes and outputs are developed within the framework of the One Health approach and that at the end of the project these results are easily channeled into the NAP to address AMR and improve AMU. The Tripartite Alliance has a comparative advantage in technical-scientific knowledge and in effective interaction with government entities and key actors. The Tripartite has the function of strengthening enabling environments and applying multisectoral and multi-level approaches, facilitating policy and technical dialogues with partners.

The stated objectives go beyond the term of this project. However, in two initial years, structural results to be obtained will serve as the basis for achieving an integrated surveillance system for AMR/AMU that will be useful in decision-making.

The resources of the MPTF partners will be optimized and used efficiently and effectively promoting their scalability and possible mobilization of complementary resources with strategic partners.

2.3 Expected results and narrative

Outcome 1.1: Risks and benefits of AMR reflected in national budgets and in development/multi-lateral partner sector investments.

The country's main effort to prevent and mitigate AMR is constituted by the NAP-AMR, which needs to have sufficiently sensitive and specific indicators to monitor its progress and evaluate its achievements, but also to detect the risks, so the NAP-AMR will need to develop a model for managing these risks. Currently, one of

which is insufficient involvement of critical stakeholders, such as agricultural producers and consumers of food and drugs.

Outcome 1.2: Evidence base/representative data on AMR/AMU improved for policy-makers and sectors implementing AMU practices.

One of the greatest weaknesses in the country is the lack of data and evidence on the status of AMR, the status of AMU-associated infections, and on the use of antimicrobials in all relevant sectors. These are limitations for relevant, precise, integrated and sufficient indicators that act as a basis for decision-making.

In the case of AMU in terrestrial and aquatic animals, the information provided annually to the OIE has been incipient and has not shown a substantial improvement over time. Additionally, there is a lack of information regarding the use of antimicrobials in agriculture. In these cases, there are serious regulatory and resources difficulties.

To resolve these concerns, the project will gather and analyze information on the installed capacity in terms of human resources, infrastructure, equipment, service offerings and others for the integrated surveillance of AMR. This will involve the application of available diagnostic tools (such as ATLASS and others) to develop the protocols and normative bases necessary for an integrated surveillance system for AMR, including the consumption and use of antimicrobials in human, animal and plant health, respectively, as well as the evaluation of the drug dispensing system.

Additionally, the project will strengthen the capacity for the microbiological diagnosis of sentinel bacteria such as *E. coli*, *Salmonella spp*, *Campylobacter spp* and *Vibrio spp* at different stages of the production and consumption chain. In parallel, will improve the data analysis capacity of AMU and integrated surveillance, developing the model for an interoperable and intersectoral computing platform.

Outcome 2.1: Use of antimicrobials optimized in critical sectors.

One of the critical aspects that the AMR-MPTF Project will address will be the early implementation of the Program for the Optimization of the Use of Antimicrobials (PROA) to reduce the unnecessary use of antimicrobials in human health. This project will complement the progress and scope that MINSA has achieved to date with the implementation of the KOICA project.

In the case of the use of antimicrobials in animal production and agriculture, the proposal focuses on the development of guidelines for the responsible and prudent use of antimicrobials. It will involve the different sectors of animal and agricultural production and professional associations, with the aim of facilitating its application.

The MPTF will complement the actions on AMU carried out by the authorities in agricultural health, in relation to the list of antimicrobials of human medical importance used in animal and plant health in Peru, as well as the prioritized list of antimicrobials, for their regulation in animal and plant health, obtained as a result of Project UNJP/001/SLS/EU (European Union). Likewise, it will contribute to the development of protocols and procedures for the integrated surveillance of AMR, seeking its initial implementation under the One Health approach. The MPTF will contribute to complementary actions that CMS has been carrying out, with the support of the EU and KOICA projects, for capacity building, as well as awareness and advocacy.

Outcome 2.2: Improved understanding of AMR risks and response options by targeted groups.

While CMS has been developing awareness and advocacy activities to various stakeholders on AMR and AMU, these efforts need to be sustained and the most effective experiences systematized. Additionally, the spectrum of activities will be broadened to involve institutions forming human resources in human, animal, food, and environmental health, incorporating these subjects into their curricula, in addition to providing them with some practical tools.

The expected situation towards 2023 is that the foundations will be laid for the AMU and AMR surveillance systems in human and animal health and the environment. These systems will be designed to function in an

interoperable way to generate data and appropriate evidence so that the CMS and the decision makers have evidence for AMR and AMU risk management.

The AMR MPTF project and the Tripartite agencies will ensure that the policies, plans, standards, directives, protocols and other instruments that are generated and used consider gender equity, offering the same opportunities and respect of their rights to men and women.

2.4 Budget, sustainability and value for money

The execution of the activities of the AMR-MPTF project falls to national institutions that make up the CMS. Given that these activities are aligned with the NAP AMR and since most of these activities will leave installed capacities, their continuity will be contributed to by government resources, once the AMR-MPTF project is concluded.

The AMR-MPTF project will analyze the convenience of a multisectoral program by results (PpR) in the national budget and will recommend the development of protocols for studies of AMR costs under the One Health approach, which, in the medium term, may offer Guarantee of financing from the Public Treasury for the continuity of the actions of the CMS in the implementation of the NAP AMR.

In the same way, the private initiative will be promoted to contain AMR and improve AMU in the critical productive sectors of terrestrial and aquatic animals, through actions of incidence and visualization of benefits and profitability, as well as support for the formation of public-private partnerships.

The execution of the project will generate results, products and useful and objective information that serve to support the need for greater investment in those areas of less development, within a framework of equity and under a collaboration scheme with a focus on One Health. It is important to point out that the activities have been planned so that the products and results in the very short term serve as an initiator for the country to address its continuity both in the medium and long term.

It is considered that the participation of the Tripartite in the project will increase the visibility of the AMR problem in all sectors, including those in which the issue is most relegated (food safety, plant health, environment), up to the highest political levels positively influencing the inclusion of AMR in national policies and promoting a collaborative and intersectoral approach.

Given that the expiration of the National Action Plan in force coincides with the execution of the Project presented here, the CMS has a unique opportunity to carry out a review under the supervision of the Tripartite. It is considered that the impulse given by the Project and its indicators and objective results will result in a much more inclusive and dynamic National Plan of Action. Decision-making is intended to be evidence based, and to encompass all actors involved in the Antimicrobial Resistance issue.

Another result of this Project will be the full integration of the objectives of the new National Plan of Action with those of the Global Plan against AMR.

Similarly, the greater participation of the animal and agricultural production sector, academia and scientific and professional associations will be promoted in the containment of AMR and the responsible and prudent use of antimicrobials, under the premise of demonstrating the economic and social benefits of their proper use.

2.5 Partnership and stakeholder engagement

The AMR MPTF project will stimulate and promote the One Health approach at CMS, as it will entail carrying out joint activities for common objectives. The public bodies, members of the CMS, that will be involved in the Project activities, and their roles, are shown in the table below:

Public entity	Role in the AMR MPTF Project
Ministerio de Salud - MINSa	<ul style="list-style-type: none"> • Approves sector policies and resolute/ normative proposals at its level emanating from the Project and / or manages the approval of higher legal regulations.
Viceministerio de Salud Pública – VMS-MINSa	<ul style="list-style-type: none"> • AMR focal point • Counterpart of the AMR Project in human health. • Submits the normative proposals of its competence emanating from the Project to the Ministry of Health for approval.
Instituto Nacional de Salud – INS-MINSa	<ul style="list-style-type: none"> • Liaises with all stakeholders of the Project, through the CMS of NAP-AMR. • Coordinates the execution of activities to improve capacities in the design of AMR plans and programs. • Participates in activities related to epidemiological and laboratory surveillance. • Participates in activities related to AMR awareness.
Centro Nacional de Epidemiología, Prevención y Control de Enfermedades – CDC-MINSa	<ul style="list-style-type: none"> • Participates in activities related to epidemiological and laboratory surveillance. • Coordinates the execution of activities related to surveillance of AMR in human health • Shares information from surveillance. • Coordinates the execution of activities related to computer systems to integrate surveillance information.
Dirección General de Intervenciones Estratégicas en Salud Pública - MINSa	<ul style="list-style-type: none"> • Coordinates the execution of activities related to AMR cost studies. • Coordinates the activities of the Antimicrobial Use Optimization Program in human health. • Participate in activities to improve awareness and behavior changes about AMR and AMU.
Dirección General de Medicamentos, Insumos y Drogas DIGEMID- MINSa	<ul style="list-style-type: none"> • Participates in the development and implementation of the surveillance of the consumption and use of antimicrobials in human health. • Shares information from surveillance. • Coordinates the evaluation of the drug dispensing system in human health.
Dirección General de Salud Ambiental – DIGESA- MINSa	<ul style="list-style-type: none"> • Coordinates and participates in the execution of environmental surveillance activities. • Shares surveillance product information.
Sanidad de las Fuerzas Armadas - MINDEF	<ul style="list-style-type: none"> • Participates in the execution of AMR and AMU surveillance activities in their establishments. • Shares information from surveillance.
Sanidad de la Policía Nacional del Perú - MININTER	<ul style="list-style-type: none"> • Participates in the execution of AMR and AMU surveillance activities in their establishments. • Shares information from surveillance.

	<ul style="list-style-type: none"> • Participa en la ejecución de las actividades de vigilancia de la AMR y el AMU en sus establecimientos.
Ministerio de Desarrollo Agrario y Riego- MIDAGRI	<ul style="list-style-type: none"> • Counterpart of the AMR Project in agricultural health and food safety • Approves sectoral policies and resolute /normative proposals at its level emanating from the Project and / or manages the approval of legal regulations of higher hierarchy.
Servicio Nacional de Sanidad Agraria, SENASA - MIDAGRI	<ul style="list-style-type: none"> • AMR focal point • Coordinates activities related to the responsible use of antimicrobials in animal health. • Participates in the development and implementation of the surveillance of AMR and the consumption and use of antimicrobials in animal health. • Executes inspection actions in the primary production of animals and in the initial stages of processing. • Shares information from surveillance. • Participates in the evaluation of the drug dispensing system in animal health. • Participates in activities to improve capacities for the design of AMR plans and programs.
Ministerio del Ambiente - MINAM	<ul style="list-style-type: none"> • Participates in the execution of environmental surveillance activities. • Shares surveillance product information.
Ministerio de la Producción - PRODUCE	<ul style="list-style-type: none"> • Approves sector policies and resolute/ normative proposals at its level emanating from the Project and / or manages the approval of higher legal regulations
Organismo Nacional de Sanidad Pesquera; SANIPES - PRODUCE	<ul style="list-style-type: none"> • AMR focal point • Coordinate activities related to the responsible use of antimicrobials in aquaculture activity. • Participates in activities to improve capacities for the design of AMR plans and programs

It is important to note that the project activities will be developed seeking synergies with strategic actors and other ongoing projects, such as UNJP / SLS / 001 / EC and the KOICA project.

2.6 Project Implementation in the light of COVID-19

The organization of virtual activities and meetings using electronic means, as well as events and face-to-face work, in particular laboratory activities, will be prioritized when possible and in accordance with the evolution of the COVID-19 pandemic and the provisions established by both the government and the agencies of the Tripartite Alliance. Appropriate safety measures in work facilities and personal protection measures will be taken into account.

Given the potential restrictions on travel and face-to-face activities, a strategic network of focal points and technical leaders will be established that will ensure the implementation and monitoring of local activities.

2.7 Communication, Advocacy and Lesson Learning

The Tripartite Alliance agencies will promote communication mechanisms in accordance with the country's needs in this matter, including the organization and development of platforms for technical-political dialogue at all levels.

The AMR Multisectoral Commission, according to its mandate, must report to the Presidency of the Council of Ministers on the progress of the NAP-AMR activities in the country, an opportunity to ensure strategic synergies, so that the results of its actions are reflected in the national political agenda and on the sustainability of the integrated AMR surveillance system.

The project will also identify opportunities to advocate for the different actors identified and prioritized as critical, as well as their levels of interaction with other stakeholders. Likewise, from the One Health approach, intersectoral coordination and communication and with the national and subnational government levels will be strengthened.

3 Programme Implementation

3.1 Governance and implementation arrangements

The Food and Agriculture Organization of the United Nations (FAO), the Pan American Health Organization (PAHO / WHO) and the International Organization for Animal Health (OIE) are the executing agencies of this Multi-Partner Trust Fund (MPTF) project in Peru, and functioning as a Tripartite Alliance, must coordinate their actions with the government counterpart entities and the CMS AMR.

Since there has been a greater emphasis on AMR and AMU in the human health sector, this project seeks to balance the generation of data and evidence in the animal production and aquaculture sectors, as well as to lay the foundations to address AMR in plant health, food safety and impacts on the environment. This supports the distribution of funds agreed between the agencies to be allocated for this purpose.

Agency	Roles and responsibilities
FAO Focal Point	<ul style="list-style-type: none"> • Conduct the general coordination of the project and contribute to the implementation of activities in the food production and safety sector. • Ensure the monitoring and evaluation of the project and its progress. • Maintain close inter-agency communication, as well as with counterpart authorities and key stakeholders about progress, opportunities, risks and limitations. • Identify opportunities for improvement and risk containment. • Seek synergies and prevent duplication of activities with other ongoing projects.
OIE Focal Point	<ul style="list-style-type: none"> • Support the implementation of project activities in animal health, including primary food production and processing. • Maintain close inter-agency communication, as well as with counterpart authorities and key stakeholders, about progress, opportunities, risks and limitations. • Identify opportunities for improvement and risk containment. • Seek synergies and prevent duplication of activities with other ongoing projects.
OPS/OMS Focal Point	<ul style="list-style-type: none"> • Lead activities related to human health, in particular the appropriate use of antimicrobials. • Contribute to the design and development of the integrated surveillance system for AMR, ensuring the relevance and quality of the data from the national surveillance system. • Maintain close inter-agency communication, as well as with counterpart authorities and key stakeholders, about progress, opportunities, risks and limitations. • Support the implementation of project activities in human health. • Identify opportunities for improvement and risk containment. • Seek synergies and prevent duplication of activities with other ongoing projects.

FAO, PAHO / WHO and OIE will be responsible for the execution of the project as follows:

- FAO will be in charge of activities 1.1.1.b; 1.2.1.a; 1.2.1.c; 1.2.1.d; 2.2.1.a
- PAHO / WHO will be in charge of activities 1.1.1.a; 1.2.1.b; 2.1.1.a
- The OIE will be in charge of activities 1.2.1.e; 1.2.1.f; 2.1.1.b; 2.2.1.b

The Governance structure of the project will be organized as follows: The general coordination of the AMR MPTF project will be in charge of FAO, based in the city of Lima, Peru; the Management Committee; the Implementation Committee and the Technical Advisory Committee.



General Project Coordination (CGP)

The General Coordinator (GC) will exercise his/her functions in accordance with the provisions of the MPTF Tripartite.

The functions and responsibilities of the General Coordinator will be focused on decision-making for the technical and operational management of the project, coordination with Tripartite agencies, working relationships with government counterparts and articulation with key stakeholders of the public and private sectors linked to AMR / AMU. The GC will also act as the Secretariat of the Implementation Committee, for which he/she will prepare the corresponding management reports and documents, helping to achieve the project's objectives, its impact and scalability. Two (2) specialists will support the GC's actions: an administrative technician and a monitoring and follow-up specialist.

Management Committee (MC)

The GC of the project will be supported by the Project Management Committee, made up of the three institutions of the Tripartite Alliance. Administrative, operational and technical decisions on the implementation of the project will be made by consensus.

Each of the Tripartite institutions will have a technical specialist and administrative support staff to ensure the implementation of the activities under their responsibility. The technical specialists from each of the Tripartite institutions are part of the Project Management Committee.

Each of the Tripartite institutions will be governed according to their own procedures and administrative rules.

Implementation Committee (IC)

The Implementation Committee will consist of:

- Two (02) members of the AMR Multisectoral Commission - CMS (President and Technical Secretary);
- One (01) a regular member and one (01) alternate (in the absence of the head), from MINSAs authorities; MIDAGRI; PRODUCE, MINAM.
- One (01) member from each Tripartite agency (FAO, PAHO and OIE)

- General Coordinator of the project (Acting as Technical Secretariat)

Among its functions and responsibilities, the Implementation Committee will be responsible for:

- Issuing a recommendation for the approval of the annual Operating Plan, after review, its possible modifications and periodic reports of progress and financial execution.
- Conducting the Committee meetings for the issuance of recommendations to the general coordination of the project
- Coordinating with the AMR Multisectoral Commission and with the competent authorities in AMR matters, for actions related to decision-making and presentation of project progress and results.
- Reviewing and approving the pertinent reports, as corresponds to the MPTF fund and the requirements of the Tripartite
- Other actions that contribute to the fulfillment of the project objectives.

Advisory Technical Committee (ATC) (convened on an ad-hoc basis)

The ATC will be composed of:

- Professional specialists from the AMR Multisectoral Commission
- Experts from each Tripartite agency (FAO, PAHO, OIE)
- Experts from professional associations related to the subject
- Experts from academia
- Technical professionals responsible for private sector unions linked to the subject.

The ATC will have among its functions and responsibilities (individual and / or collective) to:

- Provide technical contributions, when requested by the Implementation Committee or the General Coordinator of the Project.
- Participate by invitation, in face-to-face or virtual meetings of a technical nature, held within the framework of the project.
- Others that contribute to the fulfillment of the project objectives.

The Technical Advisory Committee will be convened when requested by the Implementation Committee or the General Coordinator of the Project, for the formulation and review of documents and specialized matters. Knowledge management and M&E, fundamental to guarantee solid monitoring and evaluation of the project, will be conducted following the provisions of section 3.2 In the same manner, accountability, financial management and public dissemination, following the provisions of section 3.3 of this project.

3.2 Monitoring, reporting and evaluation

Reporting on the AMR MPTF will be results-oriented, and evidence based. Each Tripartite organisation will provide the Convening/Lead Agent with the following narrative reports prepared under instructions and templates developed by the Tripartite Joint Secretariat on AMR:

- Annual narrative progress reports, to be provided no later than three (3) months (31 March) after the end of the calendar year, and must include the results matrix, updated risk log, and anticipated activities and results for the next 12-month funding period;
- Mid-term progress review report to be submitted halfway through the implementation of the Joint Programme² (depending on timing this may merge with the annual report);

² This will be the basis for release of funding for the second year of implementation

- Final consolidated narrative report, after the completion of the joint Tripartite programme, to be provided no later than three (3) months after the operational closure of the activities of the Joint Tripartite programme.

As a minimum, the Tripartite Joint Secretariat on AMR will prepare and report on the activities funded through the AMR MPTF on a 6-month monitoring basis. Additional insights (such as policy papers, value for money analysis, case studies, infographics, blogs) might need to be provided, per request of the Tripartite joint Secretariat on AMR. The joint Tripartite programme will allocate resources for monitoring and evaluation in the budget.

Data for all indicators of the results framework will be shared with the Joint Tripartite Secretariat on AMR on a regular basis, in order to allow the Fund Secretariat to aggregate results at the global level and integrate findings into reporting on progress of the AMR MPTF.

You will be required to include information on complementary funding received from other sources for the activities supported by AMR MPTF, including in-kind contributions and/or South-South Cooperation initiatives, in the reporting done throughout the year.

Headquarters' level shall provide the Administrative Agent (UNDP MPTF Office) with the following statements and reports prepared in accordance with its accounting and reporting procedures, consolidate the financial reports, as follows (*more information on the reporting will be provided at the later time*):

- Annual financial reports as of 31 December each year with respect to the funds disbursed to it from the AMR MPTF, to be provided no later than four months after the end of the applicable reporting period; and
- A final financial report, after the completion of the activities financed by the AMR MPTF and including the final year of the activities, to be provided no later than 30 April of the year following the operational closing of the project activities.

In addition, regular updates on financial delivery might need to be provided, per request of the Fund Secretariat.

The joint Tripartite program may be subjected to a Programme Review (methodology to be determined) or joint final independent evaluation (JFEI) by the United Nations Evaluation Group's (UNEG) Norms and Standards for Evaluation in the UN System, using the guidance on Joint Evaluation and relevant UNDG guidance on evaluations. Evaluation results will be disseminated amongst government, development partners, civil society, and other stakeholders. A joint management response will be produced upon completion of the evaluation process and made publicly available on the evaluation platforms or similar to PUNOs.

3.3 Accountability, financial management, and public disclosure

The AMR MPTF will be using a pass-through fund management modality where UNDP Multi-Partner Trust Fund Office will act as the Administrative Agent (AA) under which the funds will be channelled for the MPTF through the AA. Each Tripartite organisation receiving funds through the pass-through has signed a standard Memorandum of Understanding with the AA.

Each Tripartite organisation shall assume full programmatic and financial accountability for the funds disbursed to it by the AA of the AMR MPTF (Multi-Partner Trust Fund Office). Such funds will be administered by each Tripartite Agency, in accordance with its own regulations, rules, directives and procedures. Each Tripartite agency shall establish a separate ledger account for the receipt and administration of the funds disbursed to it by the AA.

Indirect costs of the Tripartite Organizations recovered through programme support costs will be 7%. All other costs incurred by each tripartite agency in carrying out the activities for which it is responsible under the Fund will be recovered as direct costs.

Funding by the AMR MPTF will be provided on annual basis, upon successful performance of the programme. Procedures on financial transfers, extensions, financial and operational closure, and related administrative issues are stipulated in the Operational Guidance of the AMR MPTF.

Each Tripartite organisation will take appropriate measures to publicize the AMR MPTF and give due credit to the other Tripartite agencies. All related publicity material, official notices, reports and publications, provided to the press or Fund beneficiaries, will acknowledge the role of the host Government, donors, tripartite partners, the Administrative Agent, and any other relevant entities. In particular, the AA will include and ensure due recognition of the role of each Participating Organization and partners in all external communications related to the AMR MPTF.

***Legal Clause:** Please indicate if a UNDAF or UNSDCF containing Legal Context information exists currently in the country, if yes, please provide a copy; if no, please include FAO Legal Provisions as appendices (Appendices 2.1 and 2.2) to the document before signing with the Government.

Yes

No X

Annexes

Annex 1. Logical Framework

Annex 2. Risk Matrix

Annex 3. Budget Summary

Annex 4. Work plan

Appendix 1. Detailed budget (Excel)

Supporting documents

1. Supreme Decree No. 010-2019-SA that approves the Multisectoral Plan to face Antimicrobial Resistance 2019-2021 and creates the permanent Multisectoral Commission.
2. Annual Implementation Monitoring Report 2019 - Multisectoral Commission.
3. Official Letter No. 091-2021-DVMSP / MINSA, from the Vice Minister of Public Health (February 25, 2021)
4. Letter No. 0011 -2021- MIDAGRI-DVPSDA, from the Vice Minister of Policies and Supervision of Agrarian Development (February 24, 2021).
5. Official Letter N ° 053-2021-SANIPES / PE, from the Executive Director of SANIPES (February 17, 2021).
6. Submission letter signed by heads of tripartite organisations (FAO, PAHO, OIE).