

The Antimicrobial Resistance (AMR) MULTI-PARTNER TRUST FUND

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

Senegal Proposal Submission

Full proposal overview

Country	SENEGAL
Project title	Senegal One Health Antimicrobial Resistance Multi-Partner Trust Fund (MPTF) Project.
Implementing entities	Food and Agriculture Organization of the United Nations (FAO) World Health Organization (WHO) World Organization for Animal Health (OIE) Ministry of Health and Social Action (MHSA) Ministry of Livestock and Animal Production (MoLAP) Ministry of Agriculture and Rural Equipment (MoARE) Ministry of Environment (MoE) Ministry of Fishery (MoF)
Timeframe	October 2021 - (24 months)
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Other Implementing Partners	Private Sector Veterinarian Doctor Association (ODVS) , The Poultry sector national Association (IPAS) Fleming Fund Implementing Partners (NGO PATH, Merieux Foundation, Pasteur Institute of Dakar, International Union for Conservation of Nature (IUCN))

	GHSA AMR implementing Project (MTaPS, IDDS, FAO-GHSA)
Budget	
Total amount (USD) based on budget summary in Annex	USD 1 000 000 One million United States Dollars
Total amount (USD) allocated to each Tripartite partner	FAO* 417 269 WHO 302 523 OIE 280 208 ” (includes USD 330822 FAO budget and cross-cutting coordination and related cost of USD 86 447), as detailed in Annex 3 - Budget Summary and Appendix 1 - Budget Details.

Background	<p>Context and rationale and how this intervention will contribute to MPTF and NAP objectives. This section should include the following information:</p> <p>Describe the national AMR situation, including which sectors are important for AMR and why. It should also detail how they have been involved in the response to date.</p> <p>Faced with the global AMR challenge, WHO developed a global Action (GAP) on AMR with the support of FAO and OIE which was adopted in May 2015 by the World Health Assembly during its 68th session. Further, in June 2015, FAO developed an AMR action plan for 2016-2020 to support the GAP in mitigating AMR in the food and agriculture sectors. A new FAO AMR plan for 2021-2025 has been developed and validated (awaiting publication). In line with the GAP, OIE has also developed in 2016 a strategy on AMR and the Prudent Use of Antimicrobials.</p> <p>In 2016, Senegal carried out its Joint External Evaluation (JEE); AMR scores were low with three (3) on detection, one (1) on Surveillance and Stewardship and three (3) on Infection Prevention and Control (IPC). The JEE of Senegal’s technical capacity for Internal Health Regulation (IHR), resulted in the formulation of four priority activities for AMR:</p> <ul style="list-style-type: none"> • development of a national multisectoral plan to fight AMR; • strengthening multisectoral surveillance on AMR; • strengthening coordination of the various multisectoral interventions on AMR and the connection between laboratories in different sectors; and • strengthening the capacities of various stakeholders in AMR.
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In practice, in the area of AMR, these priority recommendations could be combined in two strategic areas: the conception of the national multisectoral plan and the human resources development plan,

In July 2016, in the animal health and food safety sectors, FAO conducted an assessment of the national AMR surveillance system and six animal health and food safety laboratories using the FAO assessment tool for Laboratories and Antimicrobial Resistance Surveillance Systems (ATLASS) that constituted the first step to assist countries in evaluating their AMR surveillance systems and building their capacity. The tool enabled assessment of national AMR surveillance and laboratory skills. Among the strengths identified, the experts noted the presence of the main actors necessary for the establishment of an epidemiological surveillance network (actors in the field, laboratories, Food safety control institutions and teaching institutions), as well as an effective "One Health" platform within a national task force based at the Prime Minister's Office.

These initial results served as a basis for launching the process of developing Senegal's national AMR action plan. Thus, this pilot phase constituted a real opportunity for Senegal, but also served as a model of surveillance that was extended later to the West African subregion.

Concerning AMR and antimicrobial usage (AMU), it has been reported that the global AMU had increased by 65 percent between 2000 and 2015. Moreover, the study showed that this increase is very worrying in low and middle-income countries where AMU had increased by 114 percent. Senegal has followed the same trend-

In the framework of the GAP on AMR, the OIE leads the development and maintenance of the global database on antimicrobial agents intended for use in animals, supported by FAO and WHO within the tripartite collaboration. In 2015, OIE launched its first annual data collection on antimicrobial agents intended for use in animals.

In 2019, the Senegalese Directorate of Veterinary Services of the MoL estimated the total amount of antimicrobials (such as antibiotics) imported at 14 461 kg in the animal health sector. Tetracyclines with 7 046 kg were the main therapeutic class imported. These were followed by sulfonamides (4 420 kg), Macrolides (916 kg) and Fluoroquinolones (665 kg).

The total value of authorized imports of veterinary drugs and vaccines, animal feeds, materials for veterinary use and storage materials for animal nutrition products during the year 2015 amounted to West African CFA franc (XOF) 7 550 178 369. Compared to 2014, this was a 2.7 percent increase amounting to around XOF 2 098 265 526.

In the human health sector, a national survey on the prevalence and the resistance profile of bacteria was organized in 2013 in 29 public and private laboratories carrying out antibiograms (ABG) in 11 regions of Senegal. The results enabled prioritization of monitoring of bacterial agents and a comprehensive updating of susceptibility test practice. In the fight against nosocomial infections, according to the National Health and Social Development Plan (PNDSS) (2019), almost all health facilities (91 percent) of all categories reported safe disposal of biomedical waste. Various performance levels were reported on the application of pharmacovigilance guidelines (79 percent), the safety of injections (72 percent) and the system for collecting, analyzing and treating serious adverse events (SAEs) (64 percent) (PNDSS,2019). In the agriculture sector, the Directorate of Vegetal Protection of the Ministry of Agriculture and rural equipment (MoARE) estimated that between 2018 and 2020 the quantity of imported pesticides increased from 700 669 tonnes to 769 669 tonnes.

[What has the national response been to date, what are the priority sectors and value chains in the National Action Plan for AMR?](#)

Among West African countries, Senegal has made significant progress towards building capacity for AMR surveillance, and addressing defined AMR mitigation gaps. In recent years, the Senegalese Ministry of Health of Social Action (MHSA) has not only promoted campaigns for the rational use of antimicrobials, but has also established the National Program for the Control of Nosocomial Infections (PRONALIN). The improvement in the area of infection prevention and control (IPC) enabled the country to score 3 out of 5 in the last JEE evaluation. However, many actions are concentrated at the central level (ministerial departments in Dakar) with few health facilities involved. On the other hand, at the decentralized level, facilities need to be upgraded to better manage IPC in terms of biological waste management, equipment and human resources training for a more effective attitude and practice.

In the animal health sector, where most of the medical treatment is provided by private practitioners, IPC is not yet managed by the supervisory ministry and is not subject to any management policy or financial support. Under the Global Health Security Agenda (GHSA), financed by the United States Agency for International Development (USAID), which is one of the main donor, the funding for AMR activities does not take into account the IPC indicator. Senegal, like other countries in the international community, has made a strong commitment to fight the global source of AMR, a threat that requires global

mobilization. With the technical and financial support of the Tripartite (led by WHO) and technical support of experts from different ministries and sectors, the MHPA, through the Directorate of Laboratories developed the Multisectoral National Action Plan for AMR surveillance and control (AMR NAP) for 2017-2021. This exercise involved experts from different Ministries, in particular those of Agriculture, Livestock, Fisheries, Environment, Trade and Health. Under the leadership of "*Haut Conseil National de la Sécurité sanitaire mondiale*" (High National Council for Global Health Security) (HCNSSM), this plan has been updated with an annual work plan.

In December 2017, the AMR NAP was published. It contains several key targeted areas to strengthen the capacity building on AMR mitigation in all sectors with a focus on the human and animal health sectors including: (I) improvement of integrated systems to monitor AMR data from various disease programmes; (II) improvement of coordination and communication in the human, animal, and food sectors; (III) improvement of linkage between AMR surveillance and AMU data; (IV) increase of funding for research pertaining to antimicrobials used in human and animal health; (V) human resource development and training of laboratory professionals; and (VI) and strengthening of AMR data management systems.

In 2017, the office of the Prime Minister issued a decree to institutionalize One Health (OH) in Senegal and designated the High Council of Global Health Security (HCNSSM OH) as the highest institution in charge of the management of multisectoral and OH issues with a core mandate to support the implementation of the IHR activities in a collaborative way. The national OH Platform (NOHP) includes different technical working groups (TWGs) linked to the different four (4) IHR action packages mentioned above. The different TWGs are involved in the development of strategic documents, joint work planning, concept notes and full proposal development for resources mobilization (e.g. Fleming Fund, MPTF, Global Health Security Agenda)

FAO supported interministerial consultation and coordination meetings to establish the NOHP steering committee called *Comité de Pilotage (COPIL) du Haut Conseil National pour la Sécurité Sanitaire Mondiale* (HCNSSM OH)

The HCNSSM OH organized a workshop to operationalize the NOHP and established multidisciplinary teams at national level. The ToRs of the management and functions of the NOHP TWGs and that of the Coordinator of each TWG were defined during these workshops.

What have the main achievements been to date for AMR control in the country?

Significant progress has been made using multidisciplinary approach for the control of AMR in different sectors with however a focus on the human and animal health sectors:

- a multisectoral NAP against AMR was developed and published in 2017;
- the Government of Senegal established a ñIOHP with a permanent secretariat that coordinates all the activities pertaining to OH including AMR. Moreover NOHP established an AMR TWG that includes experts from different sectors;
- various awareness raising campaigns targeting stakeholders in various sectors are carried out:
 - activities to promote the rational use of medicines are Carried out by the Directorate of Pharmacy and Medicines (DPM);
 - campaigns to inform or fight against the dangers associated with the use of over-the-counter street drugs are also carried out by the OPM in collaboration with different partners;
 - regular awareness-raising campaigns on the rational use of antimicrobials in animal health is carried out by the National Order of Veterinary Doctors | *Ordre des Docteurs Vétérinaires du Senegal* as well as by representatives of veterinary drug companies with the support of organization such as FAO;
 - various training for awareness such as that for pharmacists (human and animal health sectors) have been carried out;
 - since 2019, during the yearly World Antimicrobial Awareness Week (WAAW), campaigns targeting different stakeholders such as physicians, veterinarians, pharmacists, farmers, students, academic and research professionals, policy makers, custom services and government representatives are carried out.
- a pilot study for the Tricycle programme for surveillance of Extended-Spectrum-Beta Lactamases (ESBL) producing *Escherichia coli* in humans, food and the environment was conducted from 2018 to 2019; and
- laboratories have been more incapacitated to detect and notify some priority antimicrobial-resistant pathogens to the specific government departments relevant for the particular sector.
 - In the human health sector, there are 45 laboratories (public and private) that are actually involved in the detection and monitoring of AMR. As a result of this investigation, a list of priority bacteria to be monitored has been established,

training sessions organized to strengthen laboratory capacity and a monthly data reporting system of bacterial resistance to antibiotics implemented.

- in the animal health and food safety sectors, the ATCLASS report highlighted the strengths (e.g. national coordination, existence of a AMR NAP, and existence of key resources for AMR detection) and the weaknesses (e.g. no reference laboratory, absence of key indicators for samples collection and data analysis) of the AMR surveillance system and provided recommendations for improvement. This enabled FAO to support capacity building for AMR detection in some of the laboratories assessed e.g. in terms of equipment, reagents and data management. In addition, two staff from the “*Laboratoire National de l’Elevage et des Recherches Vétérinaires* (LNERV)” and the Pasteur Institute were trained and became certified as ATCLASS assessors.
- Since 2013, Senegal has adopted the international standard ISO 15189 and the Laboratories Directorate has set up a system to support the quality approach in human health laboratories. This system is based on the organization of quality audits using the checklist of the Stepwise Laboratory Improvement Process Towards Accreditation (SLIPTA). Also coaching consisting of training sessions and supervision is also a requirement of the standard. Audits were performed in 2013 and 2016.
- in food safety and animal health, guidelines (<http://www.fao.org/3/i4296t/i4296t.pdf> Self), for risk analysis of foodborne antimicrobial resistant microorganisms are available (CAC/GL 77-2011). Foodborne pathogens are also screened at the National Laboratory for Analysis and Control at the Ministry of Trade (LANAC). With the support of FAO, the latter laboratory has now the capacity of performing antimicrobial susceptibility testing (AST).
- Several other laboratory activities supported by different partners were carried out including e.g., the organization of refresher training sessions on AMR for laboratory staff, the development and provision of monthly AST data collection sheets; the integration of collection tools into the District Health Information System-2 (DHIS platform, monthly data reporting and supervision of laboratories. The training sessions involved different laboratories from the human and animal health as well food safety sectors.

- Inspection for falsified and substandard drugs is carried on a regular basis. Moreover, there is an interdepartmental national committee to fight against illicit sale of drugs and

different institutions are dedicated to drug management. A national antimicrobial management plan has also been developed in 2020 by a multisectorial OH framework and validated by the AMR TWG in 2021.

- Pilot studies financed by the ministry of fishery on antimicrobial residues in aquaculture products from 17 farms were conducted in 2019. at the international veterinarian school in Dakar. The results suggested that there is no residue in the products tested for the following antibiotics .screened: betalactamine, tetracycline, chloramphenicol, aminoglycoside and macrolide.
- A nationwide survey to measure and assess AMU in the livestock industry was conducted in 2019. Data from 57 technicians, veterinary practitioners and pharmacists as well as 414 farms, including 22 dairy farms and 392 poultry farms were collected. The analysis of the results is ongoing and will enable the establishment of a database on AMU along the value chain in the country. A computer to host the database was also provided to the Directorate of Veterinary Services (DSV).
- A Knowledge, attitudes and practice (KAP) survey about AMR and drug prescription among veterinarians was conducted in Dakar and Thiés regions in 2019. A report of the survey was shared during a training workshop with the professional stakeholders in the framework of One Health approach.
- A protocol for AMU and AMC was developed ,.
- A National Program Against Nosocomial Infections (PRONALIN) was set up in 2004 and a strategic action plan 2005-2015 was developed (<http://www.formation.sante.gouv.sn/course/index.php?categoryid=19>). the primary goal was to reduce Healthcare-Associated Infections (HAI), but also to avoid being infected or transmitting multi-resistant bacteria in healthcare setting. Twelve years after the establishment of PRONALIN, the concrete achievements are:
 - the establishment of Nosocomial Infections Control Committees (NICC) and the Committees on Health, Safety and Working Conditions (HSWCC) in all hospitals and health centres. Numerous training courses were carried out, technical tools and a roadmap were put at the hospitals disposal for the implementation of the main processes for basic hygiene and the prevention of infections;
 - the establishment of national associations of communicators and patients for the improvement of the quality and the safety of health care in Africa (section for Senegal), which were able to play a decisive role in information and awareness raising on AMR and AMU;

- the existence of a national committee for the proper use of antimicrobials for the prevention of AMR has been officially set up, despite the lack of resources;
- the development of national guidelines with the technical support of the *Société Française d'Hygiène Hospitalière (SF2H)*, on national policies, treatment of community-acquired infections, treatment of healthcare-associated infections and antibioprohylaxis.

- Regulatory frameworks on antimicrobials that are also relevant for AMR mitigation are in place in Senegal. For example for the sale of antimicrobials, a prescription from a certified medical practitioner is required by law to purchase antimicrobials drugs. However, enforcement of those regulations is difficult in some settings.

- For 3 years now (since 2019) a One-health course on an AMR supported by FAO is being conducted at the faculty of medicine at the university of Cheikh Anta Diop in Dakar. Participants includes veterinarians, physicians, pharmacists (human and animal health) and diagnostic biologists.

What are the main gaps?

Despite the interventions mentioned above, funding is still a challenge for the full implementation of the AMR NAP.

Even though a few surveillance activities are conducted in some sectors, a truly OH integrated approach is lacking. There is little collaboration between the laboratories working in the different sectors and a deficit of professionals properly trained to perform AMR testing and AMU analysis. Furthermore, many laboratories are not properly equipped to perform AMR testing and detection. The lack of inadequacy of data due to a lack of laboratory capacity to carry out systematic integrated pathogen monitoring studies is a problem in risk assessment and control policy development.

In the animal health sector AMR surveillance plan is merely in place. AST is performed during routine diagnosis on request by private veterinarians and the results are returned directly to the latter without reporting.

The irrational use and disposal of antimicrobials, including antibiotics (misprescribing, self-medication, illicit market and counterfeiting) is still observed and is a potential cause of occurrence of high levels of resistance in microorganisms from human, animal, plant and environment origins. The frequent and extensive and inappropriate use of such products

on pathogens may render the antimicrobials ineffective and increase the survival of resistant strains. By being exposed to inadequate doses of drugs, microorganisms can develop strategies such as genetic mutations to resist to antimicrobials that they were originally susceptible to.

Strengthening the national committee in charge of the fight against falsified and illegally sold drugs will contribute significantly to mitigate AMR. In fact the less these products circulate, the less available they will be to uninformed users such as agro-pastoralists, both in the informal and formal sectors.

Good practice intervention studies that will support a potential behaviour changes in the farming and human health sectors need to be significantly amplified. IPC enforcement and improvement in farms and animal and human health care settings is much need in Senegal. Enforcement of legislation on antimicrobials for e.g. marketing is still a recurrent issue. Other gaps include lack of a regular monitoring plan, lack of coordination and consultation between the different actors, a single laboratory in the country for animal health and lack of human resources.

[Relation of the AMR programme to national planning and policy instruments and strategy \(e.g. health sector strategy, OneHealth strategic framework\).](#)

The government's priorities are included in the Senegal Emergent (strategic) Plan (<http://www.finances.gouv.sn/plan-senegal-emergent/>). In axis 2: human capital, social protection and sustainable development, Senegal aims to achieve strong growth, inclusive and sustainable through quality human capital to consolidate the structural change of the economy and respond to people's aspirations for a better future. In Senegal Emergent 2 strategy (PSE-2), Under the National Health and Social Development Plan (PNDSS), the MHSa established a policy for improving the quality and safety of care and services. Despite the progress made in the supply of drugs to health facilities and to enhance drugs availability through two strategies ("Jegesinaa" and "Yeksinaa"), challenges persist in drug availability which is an important dimension of service quality.

In Senegal, the results from the WHO JEE showed an overall low score in 2016. With the support of the Tripartite (led by WHO), the government of Senegal developed an AMR NAP (published in November 2017) to help address the issues identified during the JEE evaluation. This implementation of activities depicted in the latter plan is progressing quite

well with however some gaps due to e.g. lack of resources. The activities described in this proposal were defined with the goal of addressing the remaining implementation gaps.

Summary of other actors present in AMR related initiatives in the country (e.g. donor supported action)

Senegal is implementing the Fleming Fund AMR project from the UK department of Health and Human Services. That will enable synergy and complementarity of existing AMR projects to avoid duplication.

Senegal under the Fleming Fund project had recently conducted in a one health approach several activities including:

- the assessment of the LNERV and the international veterinarian school (EISMV) laboratories using the Mott Macdonald laboratory assessment Tool. This was done in collaboration the Non-government Organization (NGO), Program for Appropriate Technology in Health (PATH);
- e the elaboration of the country tailored surveillance protocol based on the poultry massey protocol;
- e the kick off meeting which was a moment to involve officials from the government;
- e the development of a sampling plan using the Massey protocol according to an existing mapping of poultry farms based on their biosafety level conducted by **FAO**;
- awareness-raising campaign for 15 professionals and S poultry farmers associations on the implementation of the protocol developed;
- practitioners were also trained on how to collect and send samples from poultry farms (broilers and Layers) for AMR surveillance to the reference laboratories;
- the Mapping of the distribution pathways for antimicrobials in the animal health sector in Senegal is also done;
- Development of the Protocol for AMU and AMC in Senegal; and
- e the FF project is also an opportunity to collaborate with Veterinary Association Order.

Among others activities conducted we can enumerate the following:

- r validated antibiotic therapy guide;
- postgraduate Diploma on AMR at the Faculty of Medicine and Pharmacy (FMPO);
- e an inventory of laboratories capable of playing a role in AMR surveillance in human health, animal health and food safety;

- harmonization of regulations at the regional level conducted by West African Economic and Monetary Union (WAEMU);
- National Antimicrobial Management Plan;
- periodic meetings of the AMR technical working group under the umbrella of the one health platform;
- antimicrobial use in the poultry sector;
- curricula for training on AMR developed in the international veterinarians' school;
- national survey on AM consumption;
- list of priority pathogens established;
- construction of an electronic platform for collection and management of AMR data at the national level;
- development and technical validation of the 2021 AMR NAP annual work Plan;
- development and Validation of the NPAM (National Plan of Antimicrobial Management);
- e development of the Human Health Antibiotherapy Guidelines for the proper use of antimicrobials;
- « overview of AMR surveillance in the poultry sector (Fleming Fund project);
- laboratory capacity building for the detection and monitoring of AMR in human health (Infection Disease Detection and Surveillance);
- laboratory capacity building for AMR detection and monitoring in the food sector (FAO);
- surveillance of AMU on poultry farms with private vet practitioners.

Summary of other actors present in AMR related initiatives in the country (e.g. donor supported action) ?

The activities of the MPTF project will fill some of the gaps in the implementation of the AMR NAP activities. Moreover, it will support and complement activities of some AMR related projects such as those of the Fleming Fund (FF) country grant and GHSA/USAID. Activities to be conducted in the AMR MPTF project have been carefully identified to avoid duplication. Activities undertaken under other projects are depicted below.

The FF project that started in October 2020 will facilitate the initiation of a stronger One Health approach in surveillance, bringing together multi-sectoral stakeholders to share surveillance data and gain a better understanding of AMR and AMU in Senegal in mainly

the human and animal health sectors and also the environment sector to a lesser extent, *However*, the FF project will focus on very limited *areas*. For example, in animal health, the FF project will support surveillance activities to assess the resistance of target bacteria (*Escherichia coli*, *Salmonella* spp) in the poultry sector only and targeting broilers and layers in 2 out of 14 regions of Senegal. The MPTF project is anticipated to support more activities in the poultry sector by covering additional S regions and screening additional bacteria such *Staphylococcus aureus*. Further, the MPTF will also support data collection in Livestock, aquaculture/Fishery and agriculture/crops and environment.

Senegal has 165 laboratories of which only 46 are able to conduct AST. The FF project will support the assessment and capacity building of 7 laboratories in human and animal health. To avoid duplication, the MPTF project will contribute to assessment and capacity building of 10 additional laboratories for AMR detection in human, animal, and environment sectors. In the human health sector, the FF project will enable capacity building of selected Laboratories on LabBook 3.0 and OHIS2 to create interconnectivity among the different systems in human, animal and environment sectors and facilitate transmission of data to GLASS when the system is amended to receive data from sectors other than the human health sector.

The FAO GHSA project will support the assessment of AMU/Antimicrobial Consumption (AMC) in livestock particularly in dairy farms. It will also support the In-service Applied Veterinary Epidemiology (ISAVET) training programme of front-line animal health officers on basic epidemiology to ensure quality data capture, analysis, synthesis and reporting. Further, the project is currently supporting, in collaboration with SILAB, the development of an AMR module in the laboratory information management system (LIMS) for use in veterinary laboratories. The MPTF will complement by supporting AMU/AMR data collection and reporting systems by developing a strategic and integrated national AMRfAMU surveillance system in humans, food, agriculture and the environment.

The specificity of the MPTF is that it will enable: (i) strengthening of Infection Prevention and Control; (ii) joint investigation and awareness campaigns that are not undertaken under the FF country Grant; (iii) monitoring/data collection in the agriculture/crop,

fisheries/aquaculture and plant/environment sectors; and (iv) AMR stewardship in hospitals.

How have the Tripartite organizations supported this work, and what work is ongoing? Is AMR incorporated in the strategic frameworks of each organization?

The Tripartite (lead by WHO) supported the development of the One Health AMR NAP for **2017-2021**.

The Tripartite collaborated to prepare and set up the JEE in December 2016, the three organizations are members of the OH platform and support some activities such as the Joint Risk Assessment and the IHR-PVS.

The tripartite supports regularly and continuously different workshops of the AMR TWG that allow to develop technical and strategic documents on AMR matters. The implementation of the AMR MPTF project will allow continuation of the current support to the AMR stakeholders through the OH platform.

The tripartite have been active promoters and implementers of an intersectoral collaborative approach among institutions and systems to prevent, detect, and control diseases among animals and humans. WHO and OIE are the two main international organizations responsible for proposing standards for public health and animal health sectors respectively. They have developed various frameworks, tools and guidance materials to strengthen the capacities at the national, regional and global level in collaboration with FAO. Despite all these interventions by the tripartite, funding is still a challenge for the full implementation of the AMR NAP. The MPTF project will contribute to the implementation of the multisectorial action plan activities aligned with the MPTF expected results.

Tripartite provided technical and financial support using the One Health approach for advocacy and capacity building for AMR mitigation. OIE helped strengthen veterinary services in terms of policies and capacity building on AMR and AMU and supported the PVS evaluation in 2016. FAO addresses AMR/ AMU in agriculture aquaculture, Livestock and for Food security and safety, to promote good practices. Also, FAO supporting capacity building of laboratories and the national surveillance system as well as training of professionals in the human, animal and environmental Health sectors.

	<p>AMR in the UN Sustainable Development Cooperation L-framework and scope to facilitate this through this programme.</p> <p>The fight against AMR is not taken into account in the UN framework cooperation plan for sustainable development. However, at the 2016 UN High-level Meeting on AMR, global leaders committed to tackling AMR and called upon the Tripartite to scale up support through a One Health approach. The UN Secretary-General convened the ad hoc Inter-Agency Coordination Group on AMR (IACG) in May 2017 in consultation with the Tripartite organizations. On receiving the IACG report in 2019, the UN Secretary-General called upon Member States for urgent support and investment to scale up AMR responses at national, regional and global levels. He recommended that one component of this should be inclusion of AMR in the UN Sustainable Development Cooperation framework (UNSDCF). Actions to address AMR at country level will be strengthened by the Tripartite, but other agencies and organizations such as UNDP, UNICEF, UNEP, GFATM, the World Bank and other development banks have a critical role to play.</p> <p>The tripartite in Senegal welcome the inclusion of AMR within United Nations Sustainable Development Cooperation Framework. The MPTF Project will raise awareness among the different stakeholders to include more evidence and experience-based guidance on AMR for the future drafting of the UNSDCFs.</p> <p><i>Suini»ary of other actors' present in AMR related initiative.s in the country</i></p> <p>Dther partners are contributing to AMR related initiatives. These are in particular the USAID implementing Projects (CDC, FAO, IDDS, MTaPS, PATH) the Fleming Fund, the Merieux Foundation, the World Bank (REDISSE).</p>
<p>Status of National Action Plan for AMR</p>	<p><i>When was the National Action Plan for AMR developed?</i></p> <p>The AMR NAP was developed in November 2017 using a One Health approach with support of the tripartite (led by WHO) following the JEE evaluation in order to address the gaps identified during the evaluation.</p> <p><i>When was the last progress report?</i></p> <p>The last progress report was done in 2021 through the e-SPARE annual evaluation with IHR national focal point.</p> <p><i>Are there plans to refresh the NAP (if so when and over what time frame)?</i></p> <p>The NAP will be reviewed every two years through a workshop with the AMR Technical Working Group, under the umbrella of the NOHP and different stakeholders.</p> <p><i>How often does the AMR coordination committee meet?</i></p>

	<p>In the TORs of the thematic groups, monthly meetings are planned. However, given the context of COVID-19, the AMR coordination committee meetings are irregular but the group can be called when needed.</p> <p><i>Which sectors are actively engaged in the committee?</i></p> <p>The sectors involved and engaged are human, animal, environmental health, agrifood, fishery, trade, water and sanitation, and the private sector.</p> <p><i>To which entity does the AIVIR national coordination committee report?</i></p> <p>The AMR TWG which coordinate AMR activities report to the permanent secretariat of the NOHP. The permanent secretariat ensures all information is provided to the steering committee at governmental level for validation.</p> <p><i>Is the private sector involved? Is civil society involved? Is academia involved?</i></p> <p>The private sector, the civil society and the academia are all involved in the AMR TWG (AMR coordination). Private sector includes e.g. Veterinarian Doctor Association (ODVS), The Poultry sector national Association (IPAS), Physicians' Association, private pharmacists, private laboratories (different sectors), and wholesaler importers (different sectors). The Civil society organization involved is The Senegalese national consumers association. For Academia different institutions such as the Faculty of Pharmacy and Medicine and Veterinarians' school are involved.</p> <p><i>How do the Tripartite organizations support the NAP committee and national coordination?</i></p> <p>The Tripartite organizations' support to the NAP activities have mainly been in the area of funding and technical support with accompanying active participation in the activities implemented. FAO supported the AMR TWG to improve coordination of AMR activities.</p>
Project Summary	
Impact	<p>Impact statement from the Tripartite AMR Results Matrix</p> <p>AMU associated behaviours and practices sustainably improved in critical sectors.</p>
Outcome(s)	<p>Relevant outcome statements from the Tripartite AMR Results Matrix</p>

	<p>Outcome 2: Evidence base/representative data on AMR/AMU improved for policymakers and the sectors implementing AMU practices;</p> <p>Outcome 2: Use of antimicrobials optimized in critical sectors.</p>
<p>Outputs and Key activities</p>	<p>Outputs from the Tripartite AMR Results Matrix</p> <p>Summary of prioritized activities from the concept note submission 1: Evidence base/representative data on AMR/AMU improved for policymakers and the sectors implementing AMU practices;</p> <p>1. Systems for generating, analysing and interpreting data on resistance and consumption/use patterns developed or strengthened</p> <p>1.1, Build a Monitoring, Evaluation and lesson learning M&E framework (MEL framework) system for AMR and AMU data collection, sharing and reporting at national level for the MPTF project (Lead FAO; WHO and OIE will contribute);</p> <p>1.2. Assess the capacities of 10 Laboratories for AMR detection in human, animal, and environment sectors using One Health approach (Lead WHO; FAO and OIE will contribute to the implementation of the activities);</p> <p>1.3. Implement a surveillance strategy for AMR to support AMU/AMR data collection and reporting systems by using global AMR surveillance efforts such as GLASS, TISSA and the international FAO AMR monitoring (InFARM) system. Also by developing a strategic and integrated national AMR/AMU surveillance systems to cover the human, food and agriculture and the environment to promote a cohesive OH reporting of national AMR/AMU data; (FAO will lead on AMR surveillance in Agriculture and WHO AMR Surveillance human health mainly at laboratory level. (OIE will lead on AMU</p> <p>1.4. Support trainings in AST in laboratories and trainings for data analysis and reporting (Lead WHO; FAO and OIE will contribute involved and engaged);</p> <p>1.5. Provide laboratory reagents and consumables to support the laboratory capacity for quality control and monitoring of antimicrobial drugs and AST in human health, animal health and agriculture value chains residues (milk, meat, aquaculture products and agriculture products) (Lead FAO; WHO and OIE will contribute involved and engaged).</p> <p>2: Systems for biosecurity and IPC strengthened in targeted countries</p> <p>2.1 Support the revision of national animal, environment and human health plans to reinforce IPC aspects, improve biosecurity, hygiene and sanitation and the vaccination</p>

	<p>coverage for key infectious diseases at national level (Lead WHO; PAO and OIE will contribute to the implementation of the activities)</p> <p>2.2 Support the development and dissemination of good practice measures on Biosecurity and Biosafety in humans, animals (terrestrial and aquatic), agriculture and the environment (Lead WHO; FAO to lead the training of farmers and OIE to train human, animal and environmental health professionals)</p> <p>2.3 Develop, validate and disseminate guidelines and tools to evaluate professional practices on IPC at the national level (Co-Lead WHO and OIE with the support of FAO)</p> <p>3: Systems for optimized use strengthened in critical sectors</p> <p>31 Provide support to the National Medicines Commission and the National Pharmacovigilance One Health Commission in the regulation and registration of antimicrobial drugs and the training of government officials so that they can act as auditors at Antimicrobial distribution points (co-Lead WHO and OIE with the support of FAO);</p> <p>32 Support 15 joint missions of the National Committee to control, collect and test the quality of medicines in markets including mislabeled or relabeled medicines, using a One Health approach (co-Lead OIE, WHO and FAO);</p> <p>33 Training of trainers on AMR/AMU awareness and communication activities using One Health approach (Lead FAO, WHO and OIE will contribute to the implementation of the activities).</p> <p>34 Provide support to organize stakeholders* awareness and advocacy campaigns on the rational use of antimicrobials (Lead FAO, WHO and OIE will contribute to the implementation of the activities).</p>
<p>Link to National Action plan</p>	<p><i>Paragraph summarizing the expected contribution to the achievement and indicating relevant objectives of National action plan</i></p> <p>MTPF outputs and outcomes aligns with the Senegal AMR NAP which is developed taking into account the global action plan (GAP) developed during the World Health Assembly in 2015 by WHO and approved by FAO and OIE. Objectives, and outcomes of the AMR NAP are aligned with the GAP aiming to fight AMR in different sectors</p>
<p>Link to country's development priorities</p>	<p>The government's commitment to the fight against AMR has been demonstrated at several levels:</p> <ul style="list-style-type: none"> - The establishment of a NOHP that hosts the AMR Technical Working Committee; - The creation of a coordinating body for laboratories through the Directorate of

	<p>Laboratories which act as the national AMR focal point;</p> <p>- The existence of a national committee for the proper use of antimicrobials for the prevention of antimicrobials resistance has been officially set up, despite the lack of resources.</p>
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<p>We the responsible officers of the Tripartite organizations take responsibility for the efficient delivery of this proposal. We confirm that the proposal has been developed in close collaboration with government counterparts and that it is aligned with the wider agenda around the Sustainable Development Goals. We will work to ensure that addressing AMR is appropriately included in the United Nations Sustainable Development Cooperation Framework, and that there is a strategy to sustain and scale up the outputs of this work.</p>	
<p>Name: Gouantoueu Robert GUEI FAO Representative</p>	<p>Signature: [Redacted] Date: 30/12/2021</p>
<p>Name: Karim Tounkara OIE Representative</p>	<p>Signature: [Redacted] Date: 06 01 2022</p>
<p>Name: Dr Lucile IMBOUA WHO Representative</p>	<p>[Redacted] 05 Janvier 2022</p>

1 Baseline and situation analysis

1.1 Problem statement (max 1 page)

Explain the problem to be addressed.

AMR is a growing threat to public health, food security and economic development. In addition to the obvious benefits to human health, the introduction and use of antimicrobials in veterinary medicine have undoubtedly contributed to the improvement of animal productivity and health in recent decades. However, their abusive use and misuse for human, animal and plant health, as well as the inappropriate usage for the prevention and treatment of various human, animal and plant infectious diseases and in animal feed for growth promotion has progressively contributed to the emergence of resistant microorganisms. At the human -animal-food-plant-environment interface, there are potential health risks such as the risks related to residues in food (whether of animal or plant origin), the risks associated with the consumption (human and animals) of food containing antimicrobial resistant microorganisms, and the risk of contamination of plants/crops and the environment with antimicrobial residues and antimicrobial resistant microorganisms from animal and human related activities.

Rapid awareness raising and urgent action are needed to address this phenomenon.

AMR is a significant public health issue whose solution requires establishment of an effective surveillance system that will collect data in all stages of the food production chain and in the human, plant and environment health sectors. To ensure such surveillance, it is important to use a coordinated multidisciplinary approach and to involve all stakeholders at the different stages.

Resistance surveillance needs to rely on the skills of laboratories and facilities that can collect and analyze data for risk assessment. Institutions in the fields of veterinary and human public health, animal health (terrestrial and aquatic animals), food hygiene and the environment are therefore involved.

Support to infection prevention and control (IPC) in the Senegal context

As part of the implementation of activities to strengthen IPC, the country was rated 3/5 in the JEE evaluation. This shows that the country has made fairly advanced progress in this area. However, the actions remain sectoral and concentrated in a few specialized institutions and at central level. After the efforts of the military hospital (*Hôpital Principal de Dakar*) for more than twenty years, other university hospitals (CHU) in the capital have also improved their facilities.

As a result, today, at the Ministry of Health and Social Action (MSAS), a department dedicated to hygiene and quality is in place to better manage IPC. In recent years, the Senegalese MOH has not only promoted campaigns for the rational use of antimicrobials, but also established the National Program for the Control of

Nosocomial Infections (PRONALIN). In addition, we are increasingly witnessing a trend among certain technical and financial partners and non-governmental organizations to approach structures that they consider eligible, to provide grants and donations that take into account the gaps related to equipment and training. Nevertheless, these are still isolated and limited actions.

On the other hand, at the decentralized level, facilities need to be upgraded to better manage IPC, in terms of biological waste management equipment and human resources and training for a more effective attitude and practice in infection prevention and control.

In the animal health sector, where most of the medical treatment is provided by private practitioners, IPC is not yet managed by the ministry of livestock and is not subject to any management policy or financial support. Under the GHSA, financed by the US Agency for International Development, which is the main donor, the funding of AMR activities does not take into account the IPC indicator.

[Supporting the fight against counterfeit drugs in Senegal](#)

In low- and middle-income countries, there is an often-overlooked practice of illicit sales, particularly of counterfeit products with a very low dosage of drug. The actions addressing the gap of AMR at country level (2016 Assessment of the Governance indicator score 1) focus more on compliance with guidelines, practices and obligations of professional health and agrifood production practitioners trained in schools that are constantly adapting their training and teaching programmes.

The causes of occurrence of drug resistance in different pathogens are strongly linked to the prescription, dispensing (in human/animal health) and use of antimicrobials. Yet the percentage of resistance caused by widespread use of counterfeit products in all sectors with no guarantee of the quality of the products is little perceived and is unfortunately often considered negligible or underestimated. This is particularly worrying as several studies conducted by the Laboratory of Analysis and Control of Veterinary Medicines of the Interstate School of Veterinary Sciences and Medicine in Dakar, show that even antimicrobials in the official and normal distribution pathway have revealed very low levels of quality of the active ingredient displayed in the product composition. Thus, strengthening the national committee in charge of the fight against counterfeit and illegally sold drugs will contribute significantly to preventing the emergence of resistant strains.

[The role of Tripartite action in supporting country action on addressing the AMR problem.](#)

With evidence for the scale of the AMR problem becoming more lucid, the global agenda-setting mechanisms were triggered, which led to various additive, complementary and incremental resolutions on the issue. Key amongst these are the World Health Assembly discussions and resolutions in 2005, 2007, 2014 and 2015.

A critical resolution of the 67th World Health Assembly held in May 2014 welcomes the establishment of the WHO Global Task Force on AMR and the *tripartite collaboration between FAO, OIE and WHO*. The resolution

urges member states to take several actions including the development or strengthening of national plans and strategies and international collaboration for the containment of AMR.

Also, at the 68th World Health Assembly held in May 2015, the scope and challenge of AMR were defined and the five global strategic objectives which should form the fundamental pillars for country action plans on AMR were set as follows:

- Objective 1: Improve awareness and understanding of antimicrobial resistance through effective communication, education and training.
- Objective 2: Strengthen the knowledge and evidence base through surveillance and research.
- Objective 3: Reduce the incidence of infection through effective sanitation, hygiene and infection prevention measures.
- Objective 4: Optimize the use of antimicrobial medicines in human and animal health.
- Objective 5: Develop the economic case for sustainable investment that takes account of the needs of all countries, and increase investment in new medicines, diagnostic tools, vaccines and other interventions.

Among West African countries, Senegal has made significant progress towards building capacity for AMR surveillance, and addressing global targets defined in the AMR GAP. The MHSA, through its Directorate of Laboratories (DL), has worked with other local partners to establish a national system for AMR surveillance and monitoring for human health sector, and this has contributed to an overall reduction *in* infections and the transmission of multidrug-resistant bacteria.

In 2017, the AMR NAP for Senegal was developed and identified several key areas aiming at strengthening in-country AMR surveillance and capacity building in both the human and animal health sectors. These include improved systems for integration and use of AMR data from various vertical disease programmes; improved coordination and communication in the human, animal, and food sectors; improved linkage between AMR surveillance data and AMU; increased funding for research in antibiotics used in human and animal health; human resource development and training for laboratory professionals; and strengthened systems for AMR data management,

1.2 AMR MPTF Results Matrix (Please refer to Appendix 3)

Outcomes and outputs adopted from the tripartite results matrix (Annex 3) and the activities designed as part of this joint tripartite programme will help to report on the indicators identified and to develop basic data at the country level. These will be used to measure the progress of the programme.

<i>Outcome</i>	<i>Output</i>	<i>Activities</i>	<i>Indicators</i>
1. Evidence base/representative data on AMR/AMU improved for policymakers and sectors implementing AMU practices	Systems for generating, analyzing and interpreting data on resistance and consumption/use patterns developed or strengthened	1.1 Build a. Monitoring, Evaluation and lesson learning system for AMR and AMU data collection, sharing and reporting at the national level for the MPTF project (Lead FAO; WHO, OIE will contribute);	1. Monitoring, Evaluation and lesson learning system for AMR and AMU data collection, sharing and reporting at national level is built,
		1.2 Assess capacities of 10 Laboratories for AMR detection in the human, animal, and environment sectors using a One Health approach (Lead WHO; FAO and OIE will contribute to the activities implementation);	2. Laboratory capacities for AMR detection in the human, animal, and environment sectors assessed using a One Health approach
		1.3 Develop and/or implement a surveillance strategy for AMR to support AMU/AMR data collection and reporting systems. This will be a strategic and integrated national AMR/AMU surveillance system for the human, food, agriculture and environment sectors and it will allow a cohesive OH reporting of national AMR/AMU data; (FAO will	3. Surveillance strategy for AMR developed and implemented to support AMU/AMR data collection and reporting systems.

		<p>lead on AMR surveillance in Agriculture and WHO on human health laboratories. OIE will lead on AMU monitoring in animals);</p> <p>1.4 Support AST Training in laboratories and training on data analysis and reporting (Lead WHO; FAO and OIE will contribute to the activities implementation)</p>	<p><i>4. Training session on AST at in laboratories, including data analysis. Implement a surveillance strategy for AMR to support AMU/AMR data collection and reporting systems by using 9 labal AMR surveillance efforts such as GLASS, TISSA and the international FAO .AMR monitoring (InFA RM) system.</i></p>
	<p>2. 1 Systems biosecurity and US strengthened in targeted countries</p>	<p>2.1.1 Support the revision of national animal, environment and human health plans to reinforce IP aspects, improve biosecurity, hygiene and sanitation and the vaccination coverage for key infectious diseases at national level (Lead WHO, FAO and OIE will contribute to the activities implementation);</p>	<p><i>/of/ono/ health plans for animals, the environment and humans are revised to reinforce APC aspects, improve biosecurity, hygiene and " Station as well as the vaccination coverage/or key infectious diseases at national level</i></p>

2. Use of antimicrobials optimized in critical sectors	2.1.2 Support the development and dissemination of good practice measures on Biosecurity and Biosafety in humans, animals (terrestrial and aquatic), agriculture and the environment (Lead WHO; FAO to lead the training of farmers and OIE to train human, animal and environmental health professionals)	<i>6. Good practice measures on Biosecurity and Biosafety in human, animal (terrestrial and aquatic), agriculture and environment sectors developed and disseminated.</i>
	2.1.3 Develop, validate and disseminate guidelines and tools to evaluate professional practices on IPC at the national level (Co-Lead WHO and OIE with the support of FAO)	<i>7. Guidelines and tools to evaluate professional practices on IPC at the national level are developed, validated and disseminated</i>
	2.2.1 Provide support to the National Medicines Commission and the National Pharmacovigilance One Health Commission in the regulation and registration of antimicrobial drugs and the training of government officials so that they can act as auditors at antimicrobials distribution points (co-Lead WHO and	<i>8. The National Medicines Commission and the National Pharmacovigilance One Health Commission strengthened in regards to regulation and registration</i> <i>9. Antimicrobial drugs registered with the National Medicines</i>

	<p>2.2. Systems for optimized use strengthened in critical sectors.</p>	<p>OIE with the support of FAO;</p>	<p><i>Commission and the National Pharmacovigilance One Health Commission</i></p> <p><i>10. Training sessions for government officials so that they can act as auditors at AMs distribution points</i></p>
		<p>2.2.1 Support joint missions of the National Committee to control, collect and test the quality of medicines in markets including mislabeled or relabeled medicines, using a One Health approach (co-Lead OIE, WHO and FAO);</p> <p>2.2.2 Training of trainers on AMR/AMU awareness and communication activities using One Health approach (Lead FAO, WHO and OIE. will contribute to the activities implementation).</p>	<p><i>11. Joint missions of the National Committee to control, collect and test the quality of medicines in markets, including mislabeled or relabeled medicines, using a One Health approach</i></p> <p><i>12. The training of trainers on AMR/AMU awareness and communication activities using One Health approach is supported</i></p>
		<p>2.2.3 Provide support to organize stakeholders' awareness and advocacy campaigns on the rational use of antimicrobials (Lead FAO, WHO and OIE will contribute to the activities implementation).</p>	<p><i>13. Awareness and advocacy campaigns on the rational use of antimicrobials are organized</i></p>

1.3 Stakeholder mapping and target groups (max 2 pages)

The proposed project would provide opportunities for technical assistance in monitoring and evaluation systems IPC/biosecurity, Antimicrobial Stewardship (AMS) and AMR awareness. The beneficiaries would include:

- Central government (MHSA, Livestock Ministry, Ministry of Environment, Ministry of Agriculture, Ministry of fishery, Secretariat of the Government, NOHP, Interior Ministry)
- Local governments (Head of district, District Secretary, Health office, Animal Health office)
- Hospitals, veterinary hospitals and human/animal health centers
- Medical and veterinary practitioners
- Farmers and farm owners
- Civil society and non-governmental organizations
- Academia
- Communities

The MHSA, Ministry of Livestock and Ministry of Environment will develop the legislations and policy matters related to implementation of the AMR NAP including governance mechanisms, AMR surveillance, and AMU. The local government through the Secretary General of The Government (SGG) will play an important role in effective implementation and monitoring of AMR/AMU activities in close coordination with the livestock sector and the public health sector.

The AMR — TWG led by the Secretary General of the Government comprising members from different ministries, other organizations, and Technical and Financial Partners, as all members of the Tripartite, will be the key coordinating body for the overall AMR activities at the national level.

2 Programme strategy

2.1 Overall strategy (max 2 pages)

Senegal has around 200 laboratories, of which 45 can perform AMR detection and monitoring. The project will contribute to improving national coverage through the achievement of the following objectives:

- Strengthen the capacity of laboratories in all sectors for the detection and reporting of all priority antimicrobial resistant pathogens;
- Ensure surveillance of infections caused by all prioritized antimicrobial resistant pathogens;
- Control health care-associated infections;
- Ensure rational management and use of antimicrobials;
- Inform and raise awareness on the issue of antimicrobial resistance.

The IVIPTF programme will allow a multisectoral and multi-disciplinary effort under the leadership of the HCNSSM OH and with the support from the tripartite cooperation through the AMR TWG.

With its OH approach, the programme will allow the following:

- implementation and/or improvement of policies in the fight against AMR;
- harmonization of data collection, performing antibiotic susceptibility testing, data analysis;
- decision-making and improved coordination;
- integrated and inclusive approach of the different sectors under the OH approach, which will lead to improved outcomes in the fight against AMR; and
- improved visibility of AMR data from all sectors.

Given that most of the project activities are derived from the AMR NAP and that the tripartite cooperation provides technical and financial support for the coordination of the AMR Thematic Group meetings that monitor the AMR NAP activities, implementation is expected to allow for rapid and significant progress in AMR control.

The availability of resources for the implementation of the activities will accelerate progress in the implementation of the NAP before the next JEE evaluation.

The integrated approach is the added value. The programme will be implemented under an OH approach within the tripartite financing the implementation of the AMR NAP through laboratory capacity building, data collection and analysis. The activities selected by the country as part of this project are priority activities originating from the AMR NAP. Their implementation will fill the gaps identified in the JEE for AMR action package.

Government commitment and the ownership will be very important moving forward the implementation of activities. The AMR NAP implementation- lessons learned will be leveraged towards scaling up. The AMR MPTF project will support the government with:

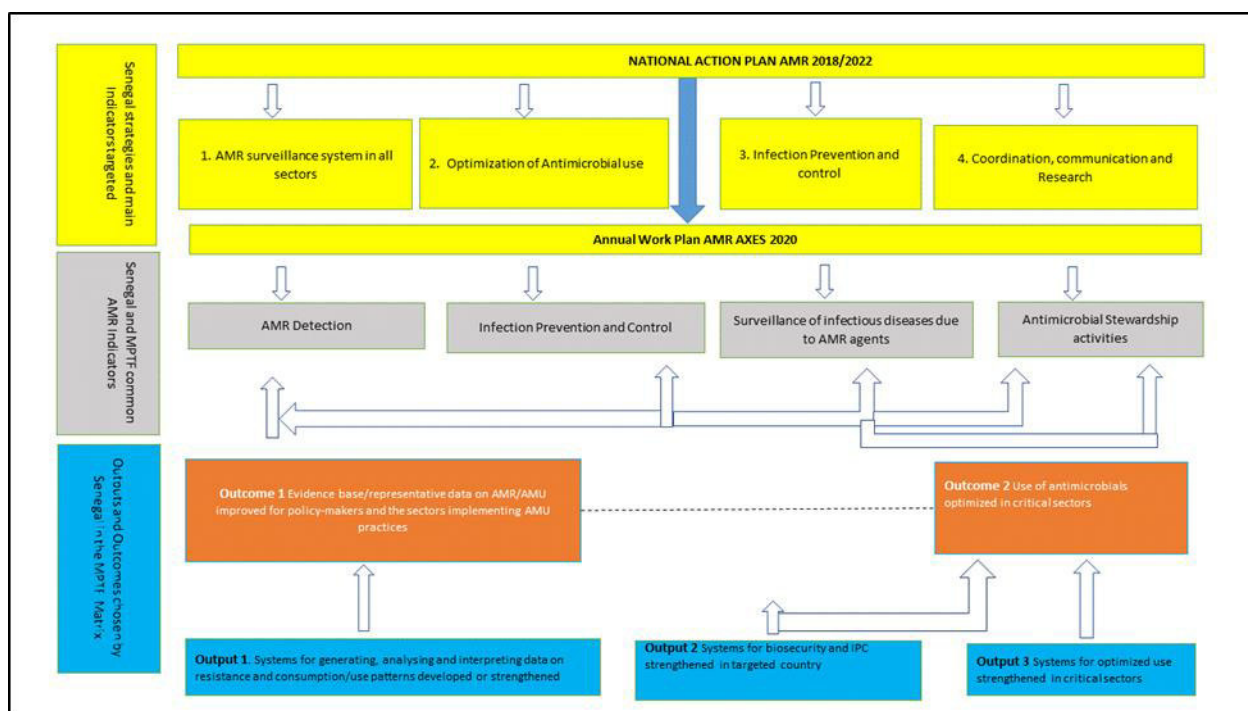
- improving the AMR and AMU evidence base and representative data available to policy makers and sectors implementing AMU practices; and
- rational use of antimicrobials in critical areas of concern;

The project is complementary to other ones whose synergy of actions will contribute to the achievement of the expected results.

Upon completion of this project, an evaluation will be conducted to measure its impact and the lessons learned, make recommendations and envisage scaling-up. These measurements and evaluations will use predefined indicators to measure the following results:

- the AMR and AMU evidence base and representative data available to policy makers and sectors implementing AMU practices are improved; and
- rational use of antimicrobials in critical areas is effective.

2.2 Theory of Change (max. 2 pages)



The priority objective of the project partners (MHSA, MoL, MoE) is the implementation of the NAP, hence this proposal. Therefore, their involvement will be critical to achieve the outcomes. The Tripartite will use its influence at all levels to encourage the initiation and functioning of intersectoral coordination mechanisms that will accelerate the implementation of the NAP. They will contribute their technical expertise in their relevant sectors and ensure stakeholders are engaged to establish Inter-Ministerial coordination and "implement the remaining activities.

The key assumptions underlying the Theory of Change for this support are as follows:

- AMR remains a high-level national political priority.

Partners are sufficiently engaged to implement AMR activities at national, regional and district level.

- Policy makers, health care practitioners, dispensers and other key stakeholders commit to applying, promoting and monitoring the prudent use of antimicrobial agents based on the evidence, guidelines and legislative frameworks generated through the activities.

- The communication strategies and identified activities are the most appropriate way to engage target groups and to increase their understanding of AMR risks and AMU behaviours.

Any changes in the understanding of AMR risk also contributes to changes in behaviours for optimized AMU in critical sectors.

The project assumes responsibility to implement the identified activities in close collaboration with the country stakeholders and partners. The project intends to advocate for the importance of intersectoral coordination mechanisms for sustainable action against AMR; the importance of implementing the antimicrobial stewardship across critical sectors; the active engagement of all stakeholders including livestock producers, veterinarians, drug manufacturers, suppliers, importers, regulators, policy makers and ultimately the consumers and public.

FAO, OIE and WHO will contribute to strengthen systems for biosecurity and IPC, strengthen systems for optimized use in the critical sectors; and implement engagement plans with critical stakeholder groups using One Health approaches in each sector. The Tripartite, using its expertise and network of experts, will bring and share good practices on intersectoral coordination, antimicrobial stewardship, and effective communication strategies. The national partners will use their knowledge and experiences gained so far to identify gaps and means of bridging them during the consultation meetings in order to jointly address the threat of AMR in Senegal.

As the project activities will be implemented under the oversight of the Tripartite and its national partners, using collective wisdom, it is expected that the objectives set out can be achieved using the resources allocated as per the project proposal.

Answering these questions leads to a complex, not always linear Theory of change (ToC) which opens a systemic view, as it maps the entire change process influenced by the different actions/measures. The ToC is seen as a way to plausibly demonstrate impact and shows which objectives can realistically be achieved within the time frame and financial scope of a programme; it will also demonstrate which impacts can be expected beyond the project's sphere of responsibility.

2.3 Expected results and Narrative {max 2-3 pages, excluding tables}

The Tripartite proposal activities include:

- 1) Build a Monitoring, Evaluation and lesson learning system for AMR and AMU data **collection**, sharing and reporting at national level for the MPTF project (**Lead: FAO; WHO, OIE will contribute**).
- 2) Assess capacities of 10 Laboratories for AMR detection in the human, animal, and environment sectors using a One Health approach (**Lead: WHO; FAO and OIE will contribute to the activities implementation**).

- 3) Develop and/or implement a surveillance strategy for AMR to support AMU/AMR data collection and reporting systems. This will be a strategic and integrated national AMR/AMU surveillance system for humans, food, and agriculture and for the environment and it will allow for a cohesive OH reporting of national AMR/AMU data; **(FAO will lead on AMR surveillance in Agriculture and WHO on human health laboratories. OIE will lead on AMU monitoring in animals but also a coordination among the three organizations).**
- 4) Support AST Training in laboratory and training on data analysis and reporting (Lead: WHO; **FAO and OIE will support to the activities implementation).**
- 5) Support the revision of national animal, environment and human health plans to reinforce IPC aspects, improve biosecurity, hygiene and sanitation and the vaccination coverage for key infectious diseases at national level (Lead **WHO; FAO and OIE will contribute to the activities implementation).**
- 6) Support the development and dissemination of good practice measures on Biosecurity and Biosafety in humans, animals (terrestrial and aquatic), agriculture and the environment (Lead WHO ; **FAO to lead the training of farmers and OIE to train human, animal and environmental health professionals).**
- 7) Develop, validate and disseminate guidelines and tools to evaluate professional practices on IPC at the national level **(Co-Lead WHO and OIE and FAO).**
- 8) Provide support to the National Medicines Commission and the National Pharmacovigilance one Health Commission in the regulation and registration of antimicrobial drugs and the training of government officials so that they can act as auditors at antimicrobial distribution points **(co-Lead WHO and OIE with the support of FAO);** 9) Support IN joint missions of the National Committee to control, collect and test the quality of medicines in markets including mislabelled or relabelled medicines, using a One Health approach **(co-Lead OIE, WHO and FAO).**
- 10) Training of trainers on AMR/AMU awareness and communication activities using One Health approach **(Lead FAO, WHO and OIE will contribute to the activities implementation).**
- 11) Provide support to organize stakeholders' awareness and advocacy campaigns on the rational use of antimicrobials **(Lead FAO, WHO and OIE will contribute to the activities implementation).**

These activities would contribute directly and indirectly to the following two outcomes:

1. Evidence base/representative data on AMR/AMU is improved for policymakers and sectors implementing AMU practices.
2. Use of antimicrobials is optimized in critical sectors.

The Tripartite has agreed that FAO will lead 4 activities, WHO will also lead 4 activities and the remaining activities will be co-led initiatives from the tripartite as described in the work plan in Annex 4, OIE will lead all activities or subactivities in policy concerns, particularly in Livestock sector.

The priority objective of the project partners (MHSA, MoL, MoE) is the implementation of the NAP, hence this proposal. Therefore, their involvement will be critical to achieve the outcomes. The Tripartite will use its

influence at all levels to encourage the initiation and functioning of intersectoral coordination mechanisms that will accelerate the implementation of the NAP. They will contribute their technical expertise in their relevant sectors and ensure stakeholders are engaged to establish Interministerial coordination and implement the remaining activities

The Tripartite, using its expertise and network of experts, will bring and share good practices on intersectoral coordination, antimicrobial stewardship, and effective communication strategies. The national partners will use their knowledge and experiences gained so far to identify gaps and means of bridging them.

Technical coordination, monitoring and information sharing are managed by the AMR TWG with the OH platform hosted by the General Secretariat of Government (SGG) will help sustain results.

Z.4 Budget, sustainability and value for money (max 2 pages)

The MPTF project is a true multisectoral project starting from conceptualization, planning of activities, budgeting and implementation with the tripartite taking lead in close consultation with the stakeholders in Senegal. This translates into a big "value for money" since the tripartite is now working together instead of working in isolation as used to be the case in the past. Thus, the key stakeholders working on AMR in Senegal has one point of contact (tripartite), instead of approaching separately, which ensures harmonization of activities, and effective use of time and resources to produce tangible outputs that directly addresses AMR and AMU issues in Senegal. Except for few new staff to be recruited, the project will make use of the existing **human resources available in the tripartite and the key stakeholders** (MoH, MoL, MoE) to implement the project activities.

As intersectoral coordination at the policy and decision makers' level seem to be an issue in Senegal, the tripartite will leverage its influence and inputs to the optimum to ensure productive engagement of the high-level officials in the key ministries. It is proposed that at the launching ceremony, the tripartite will participate with delegation representing global, regional and country offices and conduct separate meetings with the ministries responsible for NAP implementation. Every effort will be made to **share good practices** on One Health (from other countries) and the benefits of a functional intersectoral coordination mechanisms to propel the implementation of MPTF activities.

In addition to setting a strong intersectoral coordination mechanism for the coordination of the different AMR activities, actions will be taken to avoid duplication. More efficient AMR MPTF activities that are catalytic among the overall AMR NAP activities will be addressed by the different partners (GHSA, USAID MTaPS, Fleming Fund and the Government). The budget is designed to ensure synergies between Work planning activities ensuring value for money.

Taking into account the COVID-19 context, it will be necessary to give sometimes priority to telework and online activities. It will help to **save money by implementing some activities on a virtual mode**, and in this case of virtual implementation, the main condition will be to achieve the targeted objective of the planned activities. It will also be essential to reduce the number of staff during the implementation of programme activities in the field, in strict compliance with the barrier measures. The remaining budget will be used after clearance for **reallocation** to enhance some activities such the number of missions of the National Committee to control, collect and test the quality of medicines or the number of trainees on AMR/AMU. Awareness campaign and advocacy will be conducted in synergy with the different AMR implementing project. If needed some activities can be merged to suit the requirement on implementing through the one-health approach. The Senegal AMR MPTF budget has been developed to ensure value for money,

One of the key principles of the MPTF project is to showcase to the stakeholders in Senegal the benefits of intersectoral coordination in addressing AMR/AMU with the government leading by example (TWGs and high-level intersectoral coordination bodies) supported by the private sector, civil society and the public. Thus at the end of the project, it is envisaged that these key stakeholders will appreciate the value of working together and complementing each other's initiatives in addressing AMR/AMU issues.

The activities to be implemented in the Senegal AMR MPTF are aligned with the AMR NAP and are built in order to bring synergy on other activities already implemented in Senegal by other initiatives to ensure continuity and sustainability by increasing the target. The alignment with the AMR NAP ensures sustainable action and synergistic effort.

The AMR MPTF activities are targeted to engage all stakeholders responsible directly or indirectly in addressing AMR/AMU issues such as policy and decision makers, technical staff, private sector (livestock, drug manufacturers, importers, wholesalers, distributors, retailers, animal feed manufacturers), clinicians, diagnosticians, academicians, small-scale farmers and the public. Thus, the benefits of this project is expected to be more broader and thus equitable.

- The tripartite design brings to bear significant levels of efficiency as far as practicable and technically feasible. Actions that would have been implemented in parallel within each sector separately, can be implemented together in the spirit of one health to save cost and ensure value for money.
- The Senegal AMR MPTF project budget is designed to ensure internal synergies between activities ensuring value for money. Budgets for AMR surveillance activities can easily escalate. Thus, in this project the governance AMR activities are merged, so that while the project funds the infection prevention and control; the messages that are delivered are tailored to suit the requirements of each sector,

- The aspects that strengthen mainstreaming ensures sustainability by routing AMR NAP activities on the programmes of work of other AMR project to be funded as part of Government budget.
- The activities to be implemented in the Senegal AMR MPTF are aligned with the AMR National Action plan. These activities will be built on other activities already implemented in Senegal by other initiatives to ensure continuity. The alignment with the NAP ensures sustainable action and synergistic effort. It is therefore clear, that so far as the Senegal AMR NAP, as launched by The General Secretary of Government of Senegal, remains on the agenda for implementation; further investments in AMR would be guided by the same AMR NAP ensuring continuity, positive cumulative effect, sustainability and catalytic impact.

2.5 Partnership and stakeholder engagement (max 2 pages)

The different parties involved are:

- The Ministry of Health and Social Action (MHSA)
- The Ministry of Environment (environmental health)
- The Ministry of Fisheries (fisheries health)
- The Ministry of Agriculture and Rural Equipment (plant health)
- The Ministry of Livestock and Animal Production (animal health)
- The Ministry of Trade and Small and Medium Enterprises (Foodstuffs)

There is a AMR TWG hosted by the PREVENTION Thematic GROUP, in the leadership of the Permanent Secretary of the HCNSSM OH, under the General Secretary of the Government, to fight AMR and promote good practice for AMU/AMC.

Contribution strategies revolve around detection, surveillance, communication/awareness raising and training. The following organizations are involved:

- the Laboratory Network (public-private)
- the National Committee of the Codex Alimentarius (Communication and Awareness raising on food safety)
- the Tripartite Partnership (WHO - OIE - FAO -) (Technical and financial support)
- USAID (technical and financial support)
- the FLEMING/FUND (Financing of monitoring)
- the MERIEUX Foundation (Laboratory equipment)
- Civil Society (Communication/Awareness Raising)
- the Orders and Unions of Human and Animal Health Professionals (Coordination, Awareness raising and training)
- the private sector (financial support).

The Tripartite will have to ensure the effective implementation of the actions (e.g., in the field of human health, WHO is the lead agency; In the field of animal health, OIE Will take the lead. In the field of animal and food safety, FAO will take the lead).

It will be necessary to develop the public-private partnership and give each partner a manageable workload to ensure the success of the programmes.

The AMR MPTF project leverages the existence of the Senegal NOHP as a technical group for implementation of activities. Thus, the project work plan incorporates and funds a number of activities addressed by AMR technical working group of the One health platform.

These engagements with the OH platform are in line with the principles of building on existing systems and adding to the ongoing momentum on AMR-

Key entities involved in implementation of this project

The Senegal AMR MPTF project is designed to ensure ownership by country implementing partners. In the design of work tracks, key implementing stakeholders have been engaged from the human health, animal, Agriculture, fish, and environmental sectors.

Thus, the following entities have key implementation mandate within the project.

Ministries Departments: MHSA; Ministry of Livestock; Ministry of Fisheries and Aquaculture and rural equipment; Ministry of Environment and sustainable Development:

The above are institutions with statutory mandate to drive implementation of critical action within the various sectors. Therefore, those MPTF actions around regulation, service delivery, governance and general administration, etc. would be led by these entities leveraging the existing mandates and capacities developed over the years;

The AMR MPTF seeks to implement several actions which fall within the mandates of these organizations; hence the need to engage and work closely with the key institutions involved.

Academia and Research Organizations — University of Dakar, inter-States Veterinary School of Dakar; University of Saint-Louis, Veterinary Laboratory of Livestock and Research of Dakar (LNERV), Public Health Laboratory, the Human network laboratory:

The above Academic partners would contribute and share expertise to the MPTF project in the specific areas of research within the project;

The AMR MPTF seeks to conduct research that would inform project and policy action in relation to AMR; hence the need to continually engage academia and research institutions.

Media, Civil Society Organization (health, environment, animal, consumer protection, media); NGOs in Health, animal, environment etc.

The above partners would contribute expertise to the MPTF project in the specific areas of community mobilization for public communication.

The AMR MPTF seeks to change behaviour through public communication campaigns, hence the need to continually engage with the key actors.

AMR Country governance structures (AMR technical working group, National OH Platform and AMR Sector Focal persons)

They would be key allies to implement this project. They would also facilitate access to critical data within institutions such as monitoring and evaluation data to support project implementation:

Private Sector - Practitioners veterinarians of Senegal; Community Practitioners Pharmacists Association; Interprofessional associations poultry of farmers, veterinarians, slaughterhouses, aquaculture and livestock experts, etc.

The private sector is a major player in the supply of antimicrobial agents for use in hospitals, farms, aquaculture and livestock sectors. Their engagement brings the MPTF close to the points of action to effect the needed change or impact as necessary.

The MPTF seeks to develop investment plans and packages on AMR targeted at the private sector. Hence, the need for continual engagement with this group of stakeholders.

Tripartite partners - Tripartite agencies involved, including other UN organizations or partners,

The AMR MPTF tripartite members, WHO, FAO, OIE are critical actors within the MPTF project. The project seeks optimal implementation in order to make a case for sustained momentum within the Senegal AMR areas.

2.6 Programme implementation in the light of COVID-19

COVID-19 could have a negative impact on the implementation of field operational activities. Some sectors such as frontline health could prioritize COVID-19 response activities to the detriment of COVID-19 programme activities. Adaptation strategies such as workshops and virtual meetings will need to be developed.

It will be necessary to give priority to telework and online activities. It will also be essential to reduce the number of staff during the implementation of the programme activities in the field, in strict compliance with the barrier measures.

When planning the activities, priority must be given to their impact on the COVID-19 response.

2.7 Communication, Advocacy and Lesson Learning

The commitment of the platform materialized through the AMR technical working group which will serve as a framework for exchange and communication on the results of the MPTF for the various actors, communities and decision-makers. This will increase the visibility of the results obtained for advocacy.

The Laboratories Directorate coordinates the activities of the different laboratories and makes it possible to set up a network of more than 200 laboratories with a view to improving the collection and communication of AMR data.

This framework constitutes a means of advocacy as part of the joint tripartite programme.

The following aspects will be taken into consideration:

- The awareness raising and training of the various actors;
- Data sharing within the AMR TWG;
- Field visits and periodic meetings of pharmacovigilance committees;
- Awareness raising and communication for behavior change in the communities.

The forum below provides opportunities for high-level advocacy and communication:

The NOHP which is hosted at the General Secretariat of the government through its steering committee, will validate the results for advocacy.

- The High Council of Local Governments (HCCT), through its chairperson who is a member of the Global AMR Leaders Group, will be used to communicate project results.

3 Programme implementation

3.1 Governance and implementation arrangements (max 3 pages)

The Senegal AMR MPTF project would be implemented in line with country priorities and under the governance mechanisms set up for AMR in Senegal. Thus, implementation would be guided by the AMR TWG under the OH platform. Therefore, FAO as implementing partner of the GHSA was able to fulfill some of the gaps in human, animal, and agrifood sectors in terms of Laboratories capacities, awareness raising of professionals and communities but also students and professional curricula development in the faculty medicine and veterinary school. Senegal will benefit from Fleming Fund AMR project from the UK department of Health and Human Services. That will enable synergy and complementarity of existing AMR project to avoid duplication activities.

- The AMR AWG and sector focal persons would provide assistance within their respective sectors especially in the areas of access to data etc. (e.g. monitoring and evaluation data, etc.) while assisting on other ongoing projects on AMR e.g. Fleming Fund Country Grant.

- The AMR MPTF would engage a Project Coordinator to coordinate implementation of the AMR MPTF across the various implementing partners and supporting the tripartite focal persons on this project. This Project Coordinator would act as the AMR MPTF overall Project Coordinator for Senegal and would be responsible for project management and other associated related forms of project assistance.

- Each tripartite partner focal point would manage funds for activities implemented in their sector; working closely with the AMR MPTF Overall Project Coordinator for Senegal. The AMR MPTF Overall Project Coordinator for Senegal would also work closely with the AMR Thematic working group, sector AMR focal persons and focal persons of the tripartite to ensure fund-flow and implementation as well as effective coordinated action.

- Implementing Ministries in the context of this project would report to the project coordinator, who in turn would report to the tripartite partners, as the tripartite provides leadership.

- The project coordinator would ensure coordination with all stakeholders including the OH platform, including the AMR technical working group.

The Tripartite Partnership is composed of WHO, FAO and OIE,

- FAO, which is the leader of this consortium, supports the country through multisectoral and multidisciplinary cooperation based on a One Health approach;
- WHO initiated in 2016 the development of the AMR NAP in a One Health approach with the support of FAO and OIE of governmental institutions. WHO supported also the implementation of the national policy for IPC and the strengthening of laboratory capacity for integrated AMR surveillance among other activities; and
- the OIE, through the Veterinary services Directorate of the Ministry of Livestock, is supporting the strengthening of veterinary services through the evaluation of the performance veterinary services (PVS) carried out in 2016, which allowed an analysis of the evolution of the different critical components of veterinary services since 2008. OIE is also involved in capacity building on AMR, the notification of antibiotic consumption, and the prevention and management of AMR-related risks.

The General Secretariat of the Government ensures coordination with the setting-up of a steering committee and an AMR TWG, a framework for strategic orientation, accountability, transparency and good governance enabling the coordination and implementation of the interventions of the "One Health" Global Health security Programme in an inclusive and complementary manner. This committee strengthens the synergy of actions, complementarity in implementation and the closing of technical and financial gaps. This multisectoral and multidisciplinary approach is carried out with the effective participation of the Technical and Financial Partners (TFPs) and all the actors through the various bodies of the institutional framework (public sector, private sector and civil society).

The tripartite partnership provides a dynamic framework with synergy and complementarity of actions to combat AMR,

Strengthening the AMU surveillance in all health sectors (human, animal and environmental) and enhancing the capacity of the country's laboratories to detect Antimicrobial Resistance will undoubtedly contribute to improve the management of AMR while reducing its occurrence.

The government's commitment has translated into the following actions:

- the implementation of an administrative order relating to the creation of a body in charge of One Health;
- the creation of a prevention thematic group within the OH platform;
- the setting up of four TWG (AMR, food safety, Zoonosis, Immunization);
- the development of a 2017-2021 National Action plan for the fight against AMR; and
- the development of a National Antimicrobial Management Plan (NAMP) for human, animal and plant health.

3.2 Monitoring, reporting and evaluation.

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

- Annual narrative progress reports, to be provided no later than three (3) months after the end of the calendar year, and which 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 Programme^o [depending on timing this may merge with the annual report];
- Final consolidated narrative report, after the completion of the joint Tripartite project, to be provided no later than three (3) months after the operational closure of the activities of the Joint Tripartite project,

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 and blogs) might need to be provided, upon request of the Tripartite joint Secretariat on AMR. The joint Tripartite project will allocate resources for monitoring and evaluation in the budget.

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

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.

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*):

- an annual financial report, will be generate on 31 December of each year, with respect to the funds received from the AMR MPTF. This report is 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 3D April of the year following the operational closing of the project activities.

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

The joint Tripartite project may be subjected to a Project 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 of PUNOs.

3.3 Accountability, financial management, and public disclosure

Standard text - do not change.

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 organization receiving funds through the pass-through has signed a standard Memorandum of Understanding with the AA.

Each Tripartite organization 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 organization 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

Annexes

Annex 1 - Log Framework Template

AMR MPTF Log framework		Name of country: Senegal		
Impact: AMU associated behaviours and practices sustainably improved in critical sector				
Objectives	Indicators	Sources of verification	Key assumptions and risks	
<p>MPTF Outcome Objectives</p> <p><i>Prefill from the Tripartite RC</i></p> <p>Outcome 1: Evidence base/representative data on AMR/AMU improved for policymakers and all the sectors implementing AMU practices.</p>	<p>Indicator 1.1: Information shared on trends of AMC (human and animal health) annually to policy and decision makers</p> <p>Baseline value: Some raw data on AMC at national level is available but may be incomplete</p> <p>Target value: Complete reports on AMC and AMR at national level</p>	<ol style="list-style-type: none"> 1. <i>Report(s)/policy briefs on AMR and AMC</i> 2. <i>Project Report</i> 3. <i>Data collection templates</i> 	<p>MPTF Outcome Objectives</p> <p><i>Prefill from the Tripartite RC</i></p> <p>Outcome 1: Evidence base/representative data on AMR/AMU improved for policymakers and all the sectors implementing AMU practices.</p>	
	<p>Indicator 1.2: Database on AMR / AMU (human and animal health) set up.</p> <p>Baseline value: Existence of DHIS 2 for human health</p> <p>Target value: 01 One Health database available</p>			<ol style="list-style-type: none"> 3. <i>Database for AMC/AMU data available</i>
	<p>Indicator 1.3: Reporting of AMR / AMU data improved at</p>			

AMR MPTF Log framework		Name of country: Senegal	
Impact: AMU associated behaviours and practices sustainably improved in critical sector			
Objectives	Indicators	Sources of verification	Key assumptions and risks
	<p>national and international level.</p> <p>Baseline value: the reporting is integrating all sectors.</p> <p>Target value: 01 completed report</p>		
<p>Outcome 2: Use of antimicrobials optimized in critical sectors.</p>	<p>Indicator 2.1: Antimicrobial stewardship program implemented in additional health care facilities</p> <p>Baseline value: 1</p> <p>Target value: 3</p> <p>Indicator 2.2: Guidelines for responsible and prudent use of antimicrobials based on international standards are developed or revised (6.b MPTF)</p> <p>Baseline value: 1</p> <p>Target value: 1</p> <p>Indicator 2.3: Communication strategies developed (7.a</p>	<p>Activity reports</p> <p>Developed guidelines on AMU</p> <p>Developed communication strategies and activity reports</p>	<p>Outcome 2: Use of antimicrobials optimized in critical sectors.</p>

AMR MPTF Log framework		Name of country: Senegal		
Impact: AMU associated behaviours and practices sustainably improved in critical sector				
Objectives	Indicators	Sources of verification		Key assumptions and risks
	MPTF) Baseline value: 0 Target value: 1			
MPTF Output Objectives	Indicator	Source of Verification	Key Activities	Key Assumptions and Risks
<p><i>Output A</i></p> <p>Systems for generating, analyzing and interpreting data on resistance and consumption/use patterns developed or strengthened</p>	<p>Indicator A.1: Percentage of targeted laboratories with capacity to perform antimicrobial susceptibility testing (AST) and bacterial isolation and identification according to international standards.</p> <p>Baseline value: 22%</p> <p>Target value: 27%</p>	<p>Laboratory capacity assessment report</p> <p>Laboratory upgrade report</p>	<p>A.1.1. Build a Monitoring, Evaluation and lesson learning system for AMR and AMU data collection, sharing and reporting at national level for the MPTF project (Lead FAO; WHO, OIE will contribute)</p> <p>A.1.2. Assess capacities of 10 Laboratories for AMR detection in the human, animal, and environment sectors using One Health approach (Lead WHO; FAO and OIE will contribute to the activities implementation);</p> <p>A.1.3 Develop and/or implement surveillance strategy for AMR to</p>	<p>-Key partners sufficiently engaged.</p> <p>-No major changes in key leadership on AMR</p> <p>-Willingness to work as a team and agreement on who will take lead on each activity</p> <p>-MPTF fund released on time</p>
	<p>Indicator A.2: National surveillance system for AMR supported in human health, animal health, plant health, food and the</p>	<p>Surveillance data report from selected sites per sector</p> <p>AMR platform reports (indicating sharing of surveillance data)</p>		

AMR MPTF Log framework		Name of country: Senegal		
Impact: AMU associated behaviours and practices sustainably improved in critical sector				
Objectives	Indicators	Sources of verification		Key assumptions and risks
	<p>environment;</p> <p>National system for monitoring AMC/AMU supported in human health, animal health, plant health and food</p> <p>Baseline value: 0</p> <p>Target value: 1</p>		<p><i>support AMU/AMR data collection and reporting systems by developing a strategic and integrated national AMR/AMU surveillance systems in humans, food and agriculture and environment sectors for a cohesive OH reporting of national AMR/AMU data; (FAO will lead on AMR surveillance in Agriculture and WHO on human health laboratories. OIE will lead on AMU monitoring in animals);</i></p> <p><i>A.1.4 Support laboratory Training on AST and data analysis and reporting (Lead: WHO; FAO and OIE will contribute to the activities implementation)</i></p>	
<p><i>Output B</i></p> <p>Systems for biosecurity and IPC strengthened</p>	<p>Indicator B.1: <i>National health plans in animal, environment and human health developed or</i></p>	<p>Technical report on biosecurity standards developed with recommendatio</p>	<p>B.1.1 <i>Support revision of national health plans in animals, environment and humans to</i></p>	<p>-Staff are delegated specifically for the project activities -coordination amongst key</p>

AMR MPTF Log framework		Name of country: Senegal		
Impact: AMU associated behaviours and practices sustainably improved in critical sector				
Objectives	Indicators	Sources of verification		Key assumptions and risks
<i>in targeted countries</i>	<i>reviewed to ensure good production practices (Ref TrACSS 8.2)</i> Baseline value:0 Target value:1	ns for good production practices	<i>reinforce IPC aspects, to improve biosecurity, hygiene and sanitation and vaccination coverage of key infectious diseases at national level (Lead WHO; FAO and OIE will contribute to the activities implementation);</i>	stakeholders - Policy makers, practitioners commit and promote AMR/ IPC aspects to improve biosecurity
	Indicator B.2: <i>Guidelines and tools to evaluate professional good practices on IPC and BSS in human and animal developed, validated and disseminated at the national level</i> Baseline value:0 Target value:1	Validated Guidelines and Tools available	B.2.1 Support the development and dissemination of good practice measures on Biosecurity and Biosafety in human, animal (terrestrial and aquatic), agriculture and environment sectors (Lead WHO ; FAO to lead the training of farmers and OIE the training of humann, animal and environmental health professionals) B.2.2 Develop, validate and disseminate guidelines and tools to evaluate professional practices on IPC at the national level	

AMR MPTF Log framework		Name of country: Senegal		
Impact: AMU associated behaviours and practices sustainably improved in critical sector				
Objectives	Indicators	Sources of verification		Key assumptions and risks
			(Co-Lead WHO and OIE with the support of the FAO)	
<p><i>Output C</i></p> <p>Systems for optimized use strengthened in critical sectors.</p>	<p>Indicator C.1:</p> <p><i>Guidelines for responsible and prudent use of antimicrobials based on international standards are developed or revised</i></p> <p>Baseline value: 0</p> <p>Target value: 1</p>	Activity report	<p>C.1.1 Provide support to the National Medicines Commission and the National Pharmacovigilance One Health Commission for the regulation and registration antimicrobial drugs and conduct training of government officials to act as auditors on points of distribution of antimicrobials (co-Lead WHO and OIE with the support of FAO);</p> <p>C.2.1.2 Support 15 joint missions of the National Committee to control, collect and test the quality of medicines in markets including mislabeled or relabeled medicines using a One Health approach (co-Lead OIE, WHO and FAO);</p> <p>C.2.2 Training of trainers using One Health approach on AMR/AMU awareness and</p>	<p>-Functional AMR Technical Working Group</p> <p>-No major changes in key leadership</p> <p>-Coordination among key implementing partners</p>
	<p>Indicator C.2:</p> <p><i>Training of trainers on antimicrobial stewardship and Joint missions of the National Committee to control, raise awareness, collect and test the quality of medicines in markets including mislabeled or relabeled medicines supported using a One Health approach</i></p> <p>Baseline value: 5</p>	Activities report		

AMR MPTF Log framework		Name of country: Senegal		
Impact: AMU associated behaviours and practices sustainably improved in critical sector				
Objectives	Indicators	Sources of verification		Key assumptions and risks
	Target value: 10		<p><i>communication activities (Lead FAO, WHO and OIE will contribute on the activities implementation).</i></p> <p>C.2.3.4 <i>Provide support to organize stakeholders' awareness and advocacy campaigns on the rational use of Antimicrobials (Lead FAO, WHO and OIE will contribute on the activities implementation).</i></p>	

Annex 2 - Risk Matrix Template

Risk description	Risk Category: Contextual Programmatic Institutional	Worst case consequence for the project	Risk Score		Mitigating action	Action owner
			Impact	Likelihood		
The Covid-19 pandemic will persist during the implementation period interfering with the project implementation.	Contextual	The proposed interventions will not be implemented.	High	Moderate	<ul style="list-style-type: none"> Identify alternative ways of implementing the proposed interventions (teleworking and online workshop) <i>Reducing the number of staff during the implementation of program activities in the field, in strict compliance with the barrier measures.</i> 	. Project manager and implementers
Insufficient mobilization of stakeholders	Institutional	Interruptions/delayed implementation	Moderate	Moderate	<ul style="list-style-type: none"> Involving all relevant stakeholders working on AMR and AMU at the different steps of preparation and implementation Build capacity of the project team 	Project implementers
Delayed funding	Programmatic	Failure of the project to start as planned.	High	Low	<ul style="list-style-type: none"> Timely disbursement of funds Timely planning and coordination 	Funder
Inadequate coordination amongst the key stakeholders	Institutional	Delay in implementation of activities	High	Medium	Early consultation with key focal points and continued engagement	Tripartite

Annex 3 - Outline of Budget

Categories	FAO	OIE	WHO	TOTAL
<u>1. Staff and other personnel costs [1]</u>	137 637	72 195	110 183	320 015
<u>2. Supplies, Commodities, Materials[2]</u>	20 528			20 528
<u>3. Equipment, Vehicles and Furniture including Depreciation [3]</u>				-
<u>4. Contractual Services[4]</u>		29 991		29 991
<u>5. Travel [5]</u>	102 657	95 146	26 897	224 700
<u>6. Transfers and Grants Counterparts[6]</u>				-
<u>7. General Operating and Other Direct Costs [7]</u>	129 149	64 545	145 652	339 346
Total Direct Costs	389 971	261 877	282 732	934 580
<u>8. Indirect support costs (Max. 7% of overall budget)[8]</u>	27 298	18 331	19 791	65 420
TOTAL	417 269	280 208	302 523	1 000 000
<u>Please indicate which organisation will receive pre-financing facility [1]</u>	FAO			

<p><i>developing a strategic and integrated national AMR/AMU surveillance systems in humans, food and agriculture and environment sectors, for a cohesive OH reporting of national AMR/AMU data; (FAO will lead on AMR surveillance in Agriculture and WHO on human health laboratories. OIE will lead on AMU monitoring in animals);</i></p>																												
<p>1.4 4 Support laboratory Training on AST and data analysis and reporting (Lead: WHO; FAO and OIE will contribute to the activities implementation) (Lead WHO; FAO and OIE will contribute to the activities implementation)</p>	<p>WHO</p>	<p>Tripartite MoLAP MoE MHSA OH-Platform</p>																										
<p>Systems for biosecurity and IPC strengthened in targeted countries</p>																												
<p>2.1 Support revision of national health plans in animals, environment and humans to reinforce IPC aspects, to improve biosecurity, hygiene and sanitation and vaccination coverage of key</p>	<p>WHO</p>	<p>Tripartite MoLAP MoE MHSA OH-Platform</p>																										

<i>infectious diseases at national level (Lead WHO; FAO and OIE will contribute to the activities implementation);</i>																											
2.2 Support the development and dissemination of good practice measures on Biosecurity and Biosafety in the human, animal (terrestrial and aquatic), agriculture and environment sectors (Lead WHO ; FAO to lead the training of farmers and OIE the training of human, animal and environmental health professionals)	WHO	Tripartite MoLAP MoE MHSA OH-Platform																									
2.3 Develop, validate and disseminate guidelines and tools to evaluate professional practices on IPC at the national level (Co-Lead WHO and OIE with the support of the FAO)	WHO	Tripartite MoLAP MoE MHSA OH-Platform																									
Systems for optimized use strengthened in critical sectors.																											
3.1 Provide support to the National Medicines Commission and the National Pharmacovigilance One Health	WHO	Tripartite MoLAP MoE MHSA OH-Platform																									

<p><i>Commission for the regulation and registration antimicrobial drugs and conduct training of government officials to act as auditors on points of distribution of antimicrobials (co-Lead WHO and OIE with the support of FAO)</i></p>																											
<p>3.2 Support 15 joint missions of the National Committee to control, collect and test the quality of medicines in markets including mislabeled or relabeled medicines using a One Health approach (co-Lead OIE, WHO and FAO)</p>	OIE	<p>Tripartite MoLAP MoE MHSA OH-Platform</p>																									
<p>3.3 Training of trainers using One Health approach on AMR/AMU awareness and communication activities (Lead FAO, WHO and OIE will contribute on the activities implementation).</p>	FAO	<p>Tripartite MoLAP MoE MHSA OH-Platform</p>																									

<p>3.4 Provide support to organize stakeholders' awareness and advocacy campaigns on the rational use of Antimicrobials (Lead FAO, WHO and OIE will contribute on the activities implementation).</p>	<p>FAO</p>	<p>Tripartite MoLAP MOE MHSA OH-Platform</p>																							
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For in-country planning purposes, it may be helpful to insert the budget for each activity into the plan. This level of detail is not however required in the version submitted to the Secretariat. The outputs should align with the Tripartite AMR results matrix and log framework. This workplan should align with the plans of the respective organizations.

Appendices

Appendices are attached as separate attachments to the email received containing this guidance.

- Appendix 1 — Details of Budget template (excel sheet)
- Appendix 2.1— FAO legal document cover page
- Appendix 3.2— FAO legal document clause
- Appendix 3 —Tripartite Results Matrix

Checklist before submission

1. Country Proposal Submission Template
2. Log Framework Template (see Annex 1) (use of SMART output methodology up to the activity level)
3. Risk Matrix template (see *Annex 2*)
4. Outline of Budget Templates (see Annex 3)
5. Work Plan *Template* (see Annex 4)
6. Details of Budget Template (see Appendix 1)
7. Legal clause (please see paragraph 3.3 Accountability, financial management, and public disclosure and Appendices 2.1 and 2.2)

Please also attach the supporting documents:

8. AMR National Action Plan
9. Any AMR progress reports or other relevant documentation (the recent 3 years)
10. Endorsement of AMR National Coordination Committee
11. Letter of support from key line ministries (at least Ministry of Health and Ministry of Agriculture)
12. Submission letter signed by heads of tripartite organizations.