Overview **Senegal**

Project description

Project: Enhancing governance and coordination mechanisms to reduce antimicrobial resistance in SENEGAL (ID:00130122)

- Initial duration was 17th January 2022 to 31st October 2023

The project has benefited from an additional phase of no cost extension of one year, and the closing date is scheduled to 31st January 2025.

In Senegal, the MPTF project focus on developing an integrated national AMR/AMU surveillance system across sectors, strengthening Infection Prevention Control and biosecurity measures, assessing the quality of antimicrobials as well as ensuring the rational use of antimicrobials. The key activities include:

- Building 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
- Assessing capacities of 10 laboratories for AMR detection in the human, animal, and environment sectors using One Health approach
- Developing and/or implement surveillance strategy for AMR to 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; and
- Supporting laboratory training on AST and data analysis and reporting

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

☞ **Promoting the responsible use of antimicrobials, for the rational use of antimicrobials, activities were carried out, including:**

- **Update and strengthen the legislative and regulatory environment for antimicrobial sales in all sectors.**

Under the leadership of the Veterinary Services Department (DSV) of the Ministry of Livestock (MoL), the Agency for Pharmaceutical Regulation of the Ministry of Health (MoH) and the Plant Protection Department (DPV) of the Ministry of Agriculture (MoA), the workshop was held from August 28 to 30, 2023 in Thiès, Senegal.

The activity aims to improve knowledge of institutional and normative environment for the dispensing of pharmaceutical products, including pesticides, in Senegal.

Specifically, the workshop enabled participants to learn about normative and institutional environment for pharmaceutical products supply, particularly antimicrobials, including pesticides; to share directives relating to human, veterinary, pharmaceuticals and plant health regulation; to learn about procedures for human and veterinary drugs and pesticides registration in Senegal; and finally, to formulate recommendations for good governance of pharmaceutical and pesticide system. The workshop brought together 34 participants from the three key sectors.

The activity provided an opportunity to share Senegal's mandatory legal provisions concerning medicinal drugs and legislation control, and governing pesticides regulation in Senegal.

Following recommendations have been made to strengthen the legislative and regulatory environment for sale (channels) of antimicrobials, including pesticides, in concerned sectors:

- Finalization of animal and veterinary public health code;
- Compilation of legislative and regulatory texts for data sale collection;
- Reinforce controls on illicit drug supply channels;
- Respect hospital organization charts and train prescribers;
- Vulgarization of antimicrobial classification (application of the WHO Access, Watch, Reserve classification for antibiotics)
- Improving existing policies document on pesticide management in Senegal;
- Rehabilitate, strengthen and create pesticide control laboratories;
- Develop a communication and awareness-raising plan on pesticides;

Photo 1. Campaign to clean up illegal markets for veterinary drugs.

Photo 2. Sale of veterinary drugs in market

Photo 3. On-site pesticide storage

- **Investigate antibiotics use on livestock farms**

The main objective of this activity was to study conditions or modes and management of antimicrobials use among prescribers, farm managers in breeding farms and aquaculture ponds to establish correlation between antibiotics use (AMU) in animal health and emergence of AMR.

Specific objectives were to:

- Take stock of AMU among prescribers, on farms and in aquaculture;
- Contribute to database creation enabling tracking over time of antibiotics used in livestock sector, as well as therapeutic failures noted by practitioners.

Field activity involved visiting and administering a questionnaire to 99 veterinarians, para-veterinarians and aquaculture farm managers all 14 regions in Senegal.

Results showed that veterinary and para-veterinary practices visited, antimicrobials are sold directly without prescription, and are used without prior antibiotic susceptibility testing carried out on the pathogen responsible for bacterial infection. Veterinarian facilities do not have registers for recording quantities of antimicrobials administered, enabling animal exposure rates to be calculated. Facilities visited deliver medicines to non-entitled parties, notably livestock farmers. Most of the antimicrobials held in veterinary clinics and practices have their Marketing Authorization. The survey also revealed some issues encountered by clinic and practice managers in biomedical waste and packaging management. There is no defined procedure for biological and chemical waste management in the structures visited. A few of the agents interviewed reported having worked with hygiene services to decontaminate empty drug vials before burying them.

In fish farms, no antimicrobial use was reported. Often, these farms are faced with problems related to physico-chemical quality of pond water. It is only in very rare cases that health problems have been reported. Saprolegniose is the most common bacterial disease, and in the event of infection, fish farmers only use salt for treatment.

As far as feed is concerned, fish are fed either imported industrial feeds or locally produced artisanal feeds. Survey revealed that these feeds do not contain antimicrobials.

Photo 4. Fish farm floating

Photo 5. Fish farmer

- ☞ **AMR/AMU surveillance capacity building**

- **Assess capacities of 10 Laboratories for AMR detection in human, animal, and environment sectors using One Health approach.**

Assessment of veterinary and agriculture labs were done earlier the beginning of AMR MPTF project by Senegalese assessors using the FAO ATLASS tool.

The assessment of the capacities of ten (10) medical biology laboratories (LBM), with a view to strengthen their detection capabilities, identification of bacterial pathogens responsible for priority diseases and monitoring of antimicrobial resistance (AMR) was done. These are the LBMs of two public health establishments of level 3 (EPS3) which are national hospital centers (hospital Principal de Dakar HPD) and (hospital general Idrissa Pouye HOGIP) and eight (8) public health establishments of level 2 health (EPS2) which are the regional hospital centers (CHR) of Diourbel, Kaolack, Kolda, Louga, Matam, Tambacounda, Thies and Ziguinchor.

The assessments carried out from January 17 to March 10, 2023, made it possible to identify the needs of laboratories, the satisfaction of which will allow the optimal performance of bacteriological analyzes under satisfactory biosafety conditions and capacities to antimicrobial susceptibility testing.

The main objective of this activity is to assess capabilities of detection and identification of pathogens responsible for priority diseases and antimicrobial resistance surveillance.

Specific objectives were to identify laboratories' needs in terms of infrastructure/facilities, qualified human resources, equipment, consumables, and essential reagents.

- To estimate specific needs to guarantee hygiene and biosecurity in the laboratory.
- To assess specific needs for effective laboratory data management and reporting.

The assessment identified five main categories of needs:

- needs of human resources, equipment, consumables and reagents necessary to meet the standards required for facility's level;
- specific needs relating to bacteriological analyses, particularly in detection and characterization of pathogens responsible for priority diseases and AMR surveillance;
- needs for capacity building of staff for the detection, identification and AMR surveillance;

- needs for hygiene measures to guarantee biosecurity and safety in laboratory;
- needs to establish an effective AMR surveillance data management and reporting system in laboratory.

Photo 6. Left: bacteriology lab at regional laboratory hospital center Thies. Middle: Unfunctional Sterilization autoclave at bacteriology lab in regional hospital center Ziguinchor. Right: Assessors, biologist staff of Direction of laboratories of MoH Senegal.

- **Develop and/or implement surveillance strategy for AMR to 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, for a cohesive OH reporting of national AMR/AMU data: Workshop on cross-surveillance of antimicrobial consumption in humans and animals in Senegal.**

The joint WHO-WOAH workshop on cross-monitoring of antimicrobial consumption in humans and animals in Senegal was held from July 25 to 27, 2023 at the Novotel hotel, Dakar. This workshop was organized under the leadership of the National One Health Platform (NOHP) with the technical and financial support of WHO and WOAH through MPTF activities. Objectives of this workshop are to:

- Strengthen Senegal's knowledge and capacities on monitoring consumption of antimicrobials in human and animal health;
- Identify synergies or specificities of the two monitoring programs;
- Develop joint activities such as joint data analysis and the publication of a national report on antimicrobials consumption in Senegal;
- Discuss on strengths, weaknesses, opportunities and risks of the monitoring programs;
- Define activities to be carried out in mid and long term to strengthen and sustain the monitoring programs for antimicrobials consumption in human and animal health in Senegal.

This workshop brought together human and animal health professionals responsible for monitoring antimicrobial consumption in both sectors as well as “One Health” stakeholders in the fight against antimicrobial resistance in Senegal, notably the OH platform.

The NOHP is committed to implement through its AMR TG conclusions of this workshop on the cross-monitoring of antimicrobial consumption.

This workshop was led by representatives of WOAH HQ, WHO antimicrobial use surveillance HQ department and national WHO country office.
WHO country office supports MoH through the new Agency for Pharmaceutical Regulation (ARP) to implement its activities as a coordinating center for the surveillance of antimicrobial consumption in human health sector.

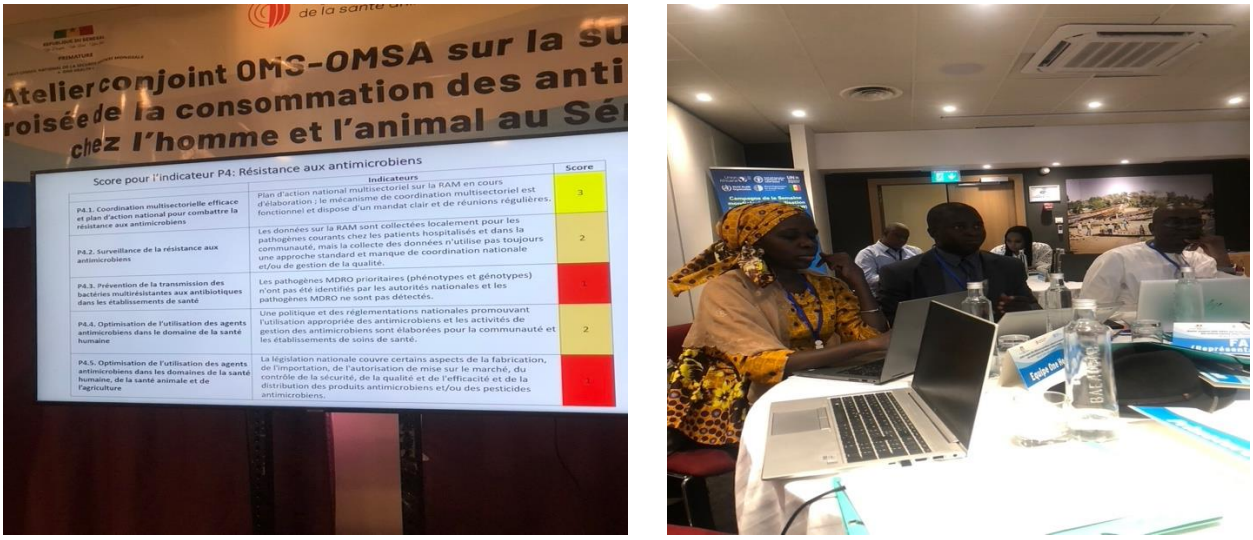

Photo 7. Cross-surveillance of antimicrobial consumption in humans and animals workshop, Novotel Dakar

☞ **Promoting best practices: strengthening IPC and biosecurity measures**

- **Support the development and dissemination of good practice measures on Biosecurity and Biosafety in human, animal (terrestrial and aquatic), agriculture and environment: Development of guidelines on Infection Prevention and Control (IPC) at the national level.**

In 2022, MPTF project helped to strengthen systems for biosecurity and Infection Prevention Control (IPC) through training workshops for surface technicians on bio cleaning and maintenance of care premises according to "One Health approach"**,** 6 sessions were organized and 180 **surfaces cleaning workers were trained** at tertiary hospitals in Dakar: Hospital Fann, Hospital Abass Ndao and Pikine.

To complete the cohort, in 2023, the Direction of Quality and hospital Safety and Hygiene (DQSHH) of MoH remake organization of workshops to strengthen capacities of health workers in human, animal, and environment sectors in IPC.

The workshop was held from 21st to 23 june 2023 at Thies. The main objective is to strengthen IPC strategy according to the "One Health" concept.

Specific objectives are to carry out an inventory of existing guidelines; to revise or develop guidelines relating to the following priority areas (bio cleaning, biomedical waste management and hand hygiene).
Recommendations were proposed on the operational level to public health facilities and to health districts:

- to further revitalize IPC committees;
- to set up hydroalcoholic solution production units in health facilities.

The National One Health Platform (NOHP) to make a plea to the country's stakeholders for collaboration between the animal sector and the approved departments of Ministry of Health (MoH) for management of biomedical waste.

- **Training workshops for surface technicians on biomedical waste management and bio cleaning using the "One Health" approach.**

As part of strengthening the infection prevention and control (IPC) strategy, the Direction of Quality hospital Safety and Hygiene (DQSHH) organizes training sessions for healthcare providers every year in all 14 regions of Senegal on hospital hygiene. This training was extended in 2022 with the support of the WHO to surface technicians in Dakar region using the "One Health" approach.

As part of the scaling up of training sessions within support of the tripartite (WHO-FAO-WOAH), sessions intended for surface technicians were carried out in the thirteen (13) other regions of Senegal following seven (07) axes defined by the DQSHH from October 18th to November 24th, 2023. Each session lasted three (03) days. These sessions focused on bio cleaning and biomedical waste management.

Sessions concerned all structures (public health facilities, health districts and other sectors) with the participation of an average of 26 surface technicians per session.

The main objective is to strengthen skills of surface technicians in biomedical waste management and bio cleaning according to the "One Heath" approach.

Specific objectives are to share:

- The prerequisites for optimal biomedical waste management, hand hygiene, personal protection measures;
- The national strategy for biomedical waste management and the assessment grid;
- The national strategy for bio cleaning in facilities.
- The WASH standards: water, hygiene, and sanitation in health facilities.

A total of 186 surface technicians were trained with a rate of 88% (186/211).

Recommendations were proposed to:

Health facilities

- Revitalize IPC committees.
- Ensuring compliance with clauses of specifications for bio cleaning and the management of biomedical waste by cleaning companies;
- Make available personal protective equipment, products and materials on biomedical waste management and bio cleaning;
- Motivate surface technicians by continuing training and bonuses;

Regional Health Direction

- Ensure the functionality of IPC committees set up in health facilities;
- Strengthen the supervision of IPC activities in health facilities;
- Support health establishments in implementing their IPC action plan.

DQSHH Advocate for:

- Recruitment of cleaning technicians by health facilities;
- Improving working conditions;
- Medical care;
- Integration of surface technicians into the local public services;
- Diploma training;
- Availability of materials and equipment for processing biomedical waste in facilities with a functional IPC committee.

Tripartite (WHO-FAO-WOAH)

- Support the DQSHH for the continuing training of surface technicians;
- Availability of IPC materials and equipment;
- Organization of World Surface Technicians Day
- Organization of regional reviews of implementation of IPC activities.

☞ **Increasing stakeholder awareness and commitment**

- **Provide support to organize stakeholders' awareness and advocacy campaigns on the rational use of antimicrobials**

A workshop to develop AMR awareness communication materials was organized and as part of the MPTF activities, the National Health Education, and Information Service (SNEISS) of the MoH organized with the support of tripartite, a workshop to develop communication materials for raising AMR awareness with the participation of all sectors. The workshop held on October 23 to 27, 2023 at Thies. The following media are produced:

- Kakemono for the MPTF project and for WHO;
- A leaflet for the community;
- A cheat sheet for community actors to disseminate messages;
- A radio spot with a TV version intended to raise awareness on WAAW celebration activities in Senegal, particularly in Saint-Louis.

Photo 8. Opening ceremony

- **Organize training of trainers using One Health approach on AMR/AMU awareness and communication activities**

The Tripartite supports the SNEISS of MoH with the participation of staff of other sectors organizing the workshop which held on November 14 and 15, 2023, with two orientation sessions for members of community organizations on antimicrobial resistance in the meeting room of the TAM hotel in Thiès. The aim of the meeting was to:

- Train at least twenty community organizations on AMR communication.
- Strengthen systems for optimized use of antimicrobials in community, a training of grassroots organization was organized.
- Share communication materials produced before,

- Raise AMR awareness, enhance and disseminate communication activities.

A total of forty persons were trained to raise AMR awareness in community through the country.

Photo 9. Training sessions for members of community organizations on antimicrobial resistance November 14th to 15th, 2023 in Thiés, Senegal

- **Celebration of WAAW 2023 in Saint Louis Senegal**

Like international community, Senegal through the NOHP celebrated WAAW in Saint Louis region in northern Senegal. Activities were chaired by the regional governor with effective participation of the regional health direction, the regional veterinary direction, the Gaston Berger University where scientific activities were held. Members of AMR TWG of NOH, others financial and technical partners were also involved in this activity.


Photo 10. WAAW 2023 celebration in Saint Louis

Main challenges

The main challenges during the implementation are:

- Availability of implementing partners; mostly involved in other activities;
- The long strike observed by professionals from livestock, agriculture and Fishing sector impacted on the implementation of AMR/MPTF activities and other projects as well.

A very close follow up meeting is organized once a month to handle the challenges encountered et discussed on level of implementation. We will continue engaging with the institutions and experts a positive discussion to overcome challenges

Learning Innovation

- MPTF AMR activities reached communities through training organized for grassroots organizations.
- Activities conducted under NOHP facilitate great collaboration between national counterpart and the tripartite that facilitate implementation of the activities.
- Coordination with other projects and events provided technical and logistical synergy, and saved resources and time;
- Training the surface technicians on biomedical waste management and bio cleaning significantly improves medical waste management in hospitals
- Training veterinary practitioners in biomedical waste management reduce significantly the risk of pathogens spreading into the environment;
- Involvement of the Students One Health innovative club (SOHIC) in raising awareness

Table 2: Review of progress against log frame

2.a Log frame outcomes

MPTF Outcome	Indicators	Assumptions – any revisions? Put here
Outcome 1: Evidence base/representative data on AMR/AMU improved for policymakers and all the sectors implementing AMU practices	**Indicator 1.1:** Information shared on trends of AMC (human and animal health) annually to policy and decision makers. **Indicator 1.2:** Database on AMR / AMU (human and animal health) set up. **Indicator 1.3***:* Reporting of AMR / AMU data improved at national and international level	AMR in Senegal is a high priority in the agenda of the government. -Key partners sufficiently engaged. -No major changes in key leadership on AMR -Willingness to work as a team and agreement on who will take lead on each activity
Outcome 2: Use of antimicrobials optimized in critical sectors.	**Indicator 2.1:** Antimicrobial stewardship program implemented in additional health care facilities **Indicator 2.2:** Guidelines for responsible and prudent use of antimicrobials based on international standards are developed or revised **Indicator 2.3:** Communication strategies developed	

2.b Log frame outputs and associated indicators

% progress against indicator: Based on time, budget and activities underway/completed **Categories:** 0% 1-25%; 25-50%; 50-75%; 75%-99% 100% **Choose best option**

MPTF Output	**Indicators**	**Progress description (activities started/completed)**	**Indicator % met**	**Assumptions – any revisions? Put here**
A. Systems for generating, analyzing, and interpreting data on resistance and consumption/use patterns developed or strengthened	**Indicators A.1** Laboratories with capacity to perform antimicrobial susceptibility testing (AST) and bacterial isolation and identification according to international standards developed.	Laboratories Assessment capacities for AMR detection in human, animal, and environment sectors using One Health approach is ongoing. 10 laboratories within 9 regions were selected among them we can note: Hospital Principal de Dakar, Hospital General Idrissa Pouye of Dakar, Regional Hospital in Diourbel, Kaolack, Louga, Matam, Saint Louis, Tambacounda, Thiés and Ziguinchor regions.	100%	No changes
	Indicators A.2 National surveillance system for AMR supported in human health, animal health, plant health, food, and the environment.	The re-inforcement of national surveillance system for AMR in various sector is implemented during MTPF activities. **T**raining workshops enabled to strengthen the capacities of 33 professionals.	50-75%	
	Indicators A.3 National system for monitoring AMC/AMU supported in human health, animal health, plant health and food.	During the workshop mapping of different existing AMR data collection platforms, a Data Management Expert Group (DMEG) had been set up. The	25-50%	

		members of the group are IT specialist, M&E expert and ARM focal point from various ministries as well as experts from tripartite (FAO-WOHA-WHO)		
B. Systems for biosecurity and IPC strengthened in targeted countries	**Indicator B.1**: National health plans in animal, environment and human health developed or reviewed to ensure good production practices. **Indicator B.2:** Guidelines and tools to evaluate professional good practices on IPC and BSS in human and animal developed, validated, and disseminated at the national level	Still ongoing Train sessions for professional on good practices on IPC and BSS in human at tertiary hospitals in Dakar: Hospital Fann, Hospital Abass Ndao and Pikine Hospital with 180 **surfaces workers** trained. IPC training sessions were organized in other regions Fatick, Kaolack, Sedhiou, Ziguinchor, Kolda, Tambacounda, Kaffrine, Kedougou, Diourbel, Saint Louis, Louga, Matam, Thies whith 186 health workers trained.	50-75% 75-90%	
C. Systems for optimized use of antimicrobials strengthened in critical human and animal sectors.	**Indicator C.1**: 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	We have noted change at the Direction of Pharmacy and Medicines that had been upgraded to a Senegalese Agency for Pharmaceutical Regulation. Activities are in progress.	50-75%	

	Indicator C.2: IEC materials developed and used for nationwide AMR campaigns	The National One Health Platform, AU MOH, MOL, MOE, and the Tripartite hosted several national and regional events during WAAW 2023. In line with the global theme "**Preventing antimicrobial resistance together in Africa**", the events gave a platform for further advocacy on AMR to policy makers from national and regional governments as well as academia, private sector, research, NGOs and media. Events were well covered on national mainstream media (newspaper, TV and social media).	100%	

Risk matrix –

Risk description	Risk Category: Contextual Programmatic Institutional	Worst case consequence for the project	Risk Score		Mitigating action	Action owner
			Impact	Likelihood		
COVID-19 situation	Contextual	Delay in start of the project activities on the ground	Hight	Low	Convert some activities to virtual such as launching, national consultations etc.	Tripartite
Inadequate coordination amongst the key stakeholders	Institutional	Delay in implementation of activities	High	Low	Early consultation with key focal points and continued engagement	Tripartite
Political instability and changes in focal points	Institutional	Changes in the activities and priorities	Medium	Low	Involve all relevant stakeholders including policy technical and operational staff working on AMR/AMU to maintain continuity	Tripartite
Delay in fund release	Programmatic	Delayed implementation of the project activities	Medium	Hight	Continuous follow up and identification of focal points at HQ/Regional/National tripartite offices.	Tripartite