Environment

Table 1: Overview

AMR MPTF Environment Programme: Strengthening capacity and actions on environment within AMR National Action Plans, sector policy and global partnership as part of a multi-organization cross-sectoral One Health Approach (ID: 00126136)
Duration: 27 months (12th March 2021 to 30th June 2023)
Activities under the AMR MPTF Environment component are focused on increasing understanding of, cooperation in, and capacity to, act on the environmental dimensions of AMR among key stakeholders. Its activities include:

- Clarified roles and responsibilities among FAO, UNEP, WHO and WOAH on environmental dimensions of AMR to efficiently work;
- Demystifying the topic and increased technical awareness and capacity among AMR stakeholders globally on environmental dimensions of AMR;
- Targeted capacity building on selected sub-topics to AMR MPTF-countries;
- Increased political engagement and commitment by environment politicians and policymakers to tackle environmental dimensions of AMR.

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

Output 1: Strategic global-level governance advocacy initiatives on AMR implemented

Given the immense challenge and breadth of action needed, clarity on how organizations work best to their mandates and capacities in a coordinated manner and ensuring a common understanding was key to efficiently deliver as one. To assist in clarifying the collaboration of the Quadripartite , i.e. the Food and Agriculture Organization of the United Nations (FAO), the United Nations Environment Programme (UNEP), the World Health Organization (WHO) and the World Organisation for Animal Health (WOAH)on the environmental dimensions of AMR, the team drafted the document on "Roles and cooperation on environmental dimensions of antimicrobial resistance (AMR) across the Quadripartite: A Guide". This was sent to each organization at HQ and the AMR MPTF Environment Steering Committee for review. The document was then circulated amongst regional colleagues from each organization, and all inputs and comments were included in the document. The document has now been completed to be used for internal use of Quadripartite Organisations at regional and country levels. This document will be updated on a regular basis to reflect ongoing changes on tools and activities of Quadripartite organisations towards AMR in the environment.

The purpose of this document is to clarify who does what on environmental dimensions of AMR among the Quadripartite organizations. This internal document summarizes the current challenges, synergies and opportunities for collaboration, scope of work, the respective mission critical areas, initiatives and programmes that among the Quadripartite organisations today on AMR and the environment.

Output 2: Improved countries' capacities for designing and implementing AMR-related policy frameworks, investment plans and programmes.

For awareness raising and capacity development, the team mapped out topics/subtopics, audience segmentation and delivery modes and created a calendar with dates for global and regional AMR-related events. Furthermore, the team also ran a series of four webinars for awareness raising for

AMR in the environment that covered from concepts of environment to technical solutions for addressing AMR within and across sectors to prevent and reduce its development, spread and transmission and reduce its impact to humans, animals and plants. All organizations prepared a listing of global stakeholders to be engaged for the 4 webinars on AMR and the environment which included stakeholders from academia, governments, private sector and international organizations. The team used the WHO/FAO/WOAH "Technical brief on water, sanitation, hygiene (WASH) and wastewater management to prevent infections and reduce the spread of antimicrobial resistance (AMR)" and the UNEP "Bracing for Superbugs: Strengthening environmental action in the One Health response to antimicrobial resistance" report" as a point of departure for the development of the webinar series.

The full webinar series was delivered through 2022 in English, with live interpretation in French and Spanish. The webinar series saw over 1000 registrations, and over 600 active participants in total. Webinar information and recordings are archived online for public use at https://www.unep.org/events/webinar/antimicrobial-resistance-environment-webinar-series .

- **Webinar 1**: Understanding the basics of environmental AMR for national action held on 14 June 2022.
- **Webinar 2**: Sources, drivers and impacts on AMR in the environment held on 7 September 2022.
- **Webinar 3:** Technical solutions for the prevention and control of AMR in the environment held on 27 October 2022.
- **Webinar 4:** Governance approaches for prevention and control of AMR in the environment held on 01 December 2022.

Key Webinar Series Findings

76 respondents to survey

- Most respondents were male (56%), 37% female and 5% prefer not to say or self-describe.
- Most respondents were from government, followed by academia and research
- 33% of respondents identified as working in human health, 25% in one health, and just under 20% in the environment sector.
- At least 50% of respondents had attended each webinar
- 100% of respondents felt their expectations were met or somewhat met for each webinar they attended
- About 96% felt that webinar content was clear or extremely clear and understandable
- Respondents felt their knowledge improved in the areas below:

WASH and wastewater from communities and health care facilities	71.70%
Pharmaceutical Manufacturing Waste and AMR in the environment	73.58%
Animal, plant and aquaculture production and AMR in the environment	73.58%
Governance for AMR	81.13%
National Action Plans for AMR	84.62%

- 96% felt they are very somewhat likely or extremely likely to apply learning to their work

- About 90% felt they were likely or extremely likely to attend future webinars on this topic

In order to better understand priority requests on environmental issues from AMR MPTF-supported countries, the team conducted interviews with country teams (Morocco, Peru, Tajikistan, Indonesia, Cambodia, Ghana, Ethiopia, Zimbabwe, Kenya, Senegal) to initiate communications and to ensure alignment with country-level capacity building activities. Additionally, a literature review on AMR and the environment-related aspects in the countries to map existing capacity building interventions was finalized.

Capacity building roadmaps were developed and finalized for selected AMR MPTF-supported countries. Building on country interviews and capacity building roadmaps, a concept note of capacity building activities was developed with the objectives to: (1) strengthen environmental AMR related institutional capacity for the next AMR National Action Plan by strengthening knowledge, attitude, and practices on collection and management of unused antimicrobials with co-benefits in addressing AMR and (2) facilitate the development and implementation of plans for safe disposal of unused antimicrobials for local municipalities and at the national level.

Outputs of the capacity building workshops and meetings were: (1) a shared understanding of actions and gaps to develop systems for collection and management of unused antimicrobials and (2) summary of the workshop and meetings, and papers outlining the recommendations to facilitate the development and implementation of plans for safe disposal of unused antimicrobials. Capacity building activities have been undertaken for Indonesia, Zimbabwe, Morocco, Tajikistan, and Peru, and the reports for countries have been finalised and translated. Formatting of reports is going prior of sharing these with the AMR MPTF countries involved in the workshops.

The team also developed a simple rapid assessment tool to support countries in identifying priority AMR and environment actions for NAPs – the tool has been piloted in the Philippines, Indonesia, Armenia and Jordan as part of the NAP revision process. The final revision and conversion to webtool will be done with feedback from pilots incorporated. The environmental component of the FAO-PMP-AMR tool has also been strengthened to support countries in addressing environmental dimensions of AMR within their specific country contexts.

Output 3: Engagement plans with critical stakeholder groups implemented.

The team has strengthened engagement with the One Health Global Leaders Group on AMR providing inputs to the "Call to Action by the Global Leaders Group on Antimicrobial Resistance: Reducing Antimicrobial Discharges from Food Systems, Manufacturing Facilities, and Animal and Human Health Systems into the Environment."

The team also organized participation in the World Water Forum 9 and organized the '*One Water One Health*' Webinar on 24 March 2022, with over 228 participants, and has participated in the yearly World AMR Awareness Week (WAAW) campaigns.

As the AMR MPTF progressed in implementation overall, the MPTF Environment team increasingly collaborated with the other global programmes. In this area, the project provided support to the AMR MPTF Legal Project through the Environmental Review Meeting for the Quadripartite One Health Legislative Assessment Tool for AMR.

Main challenges

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

The COVID-19 Pandemic had provided difficulties in proposing side events on environmental dimensions of AMR at in- person events due to event planning disruptions, delays and postponements. However, online and virtual events were explored and opportunities taken.

Levels of AMR awareness vary across countries and regions. General understanding of AMR in the environment remains a lower priority against all other hazards particularly when resources are limited as it occurs in low and middle income countries. Prioritization of activities to address AMR in the environment at the country level should be made through updated NAPs, and global efforts in this regard are needed across sectors of health, industry, agriculture/aquaculture, urban, environment, and potentially others; however, many countries still need to address environmental components of AMR in their NAPs. Most AMR MPTF countries are aware of this challenge and welcome the support provided through this project's activities.

When the other global components decided to apply for the no-cost extension, the AMR MPTF Environment team agreed to not apply for a no-cost extension for our technical component because the project was on track to finalise activities by 12 March 2023 as this was understood to be the end date for the entire global programme. The final activities to be completed were the procurement of services for the webinars and country-level capacity building activities. However, in November 2022, the team discovered that the environment project had the end date of 12 September 2022, while the other three global components had the end date of 12 March 2023.

Since then, all transactions relating to the procurement of services for the webinars and capacity building activities were halted and no activities could be advanced. Consequently, November, December and January were months of inactivity – additionally, all planned capacity building workshops and meetings in the selected countries that had been organised with country teams and government representatives were forced to be cancelled.

After learning the environment project ended in September 2022, the team was obliged to request a retroactive non-cost extension, and due to the incurred delays, not to 12 March 2023 as originally planned, but to 30 June 2023 to ensure there was enough time to complete all the activities and close the project properly.

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

Implementation was delayed by 3.5 months due to the miscommunication of the end date of the project in the system.

Learning Innovation

The method and mode of inter-agency and inter-organizational collaboration continued to be pleasant and effective in making the linkage between global and national implementation. This intersectoral cooperation and partnership has created true collaboration and enhanced synergies in cultivating new ideas, targeted activities, credible outputs and joint tasks done efficiently, avoiding unnecessary duplication and filled in the gaps that any single organization might not have been able to address. Communication flow was effectuated with clarity and ease and greatly improved delivery and messaging for targeted public uptake.

Stakeholder engagement and resource mobilization:

The interviews conducted with AMR MPTF countries were important in gaining a better understanding of the current level of awareness and technical capacity that exists to address AMR in the environment. Webinars developed as part of this project helped address some of these issues.

Lessons learned through country engagement for AMR in the environment included general indicators that a country has the capacity to integrate the environmental dimensions of AMR into its country action, including: (1) the country has an AMR NAPs and AMR Interagency Committee; (2) the AMR Interagency Committee has engaged Ministry of Environment, Ministry of Health, Ministry of Water, Ministry of Agriculture; and (3) the Ministry of Environment has identified AMR as a topic of emerging concern.

As AMR is a multi-sectoral problem, all sectors should understand the role of each other, and key stakeholders to involve in communication and advocacy include national environmental protection agencies/Ministries of Environment; legislators or officials from the executive branch of government; Country Interagency Committees on AMR (Ministry of Health, Ministry of Agriculture, Ministry of Environment, Ministry of Water); academia working on AMR, environmental protection, microbiology, chemistry, engineering, and public health; civil society; youth groups; and planetary health advocates.

Strategies to convey messaging through webinars and capacity building included: (1) giving an overview of the environmental dimensions of AMR; (2) providing the science behind the significance of environmental action for AMR; (3) providing a range of technical solutions that countries can implement or further study appropriateness; and (4) giving the range of governance, coordination, and legislative solutions for countries to take on or advocate for.

Further capacity building activities will focus on providing concrete actions for countries through technical engagements to understand country-specific problems identified; identify solutions that are applicable to AMR in the environment that may have origins from other sectors, safe disposal of unused antimicrobials in countries.

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

There is an increasingly strong interest and motivation in countries to address the environmental dimensions of AMR, both from within Ministries of Environment, as well as related Ministries such as Agriculture/Public Health/Animal Health. This increased motivation has also been noted in the international community amongst researchers, NGOs, CSOs, and intergovernmental organizations.

Table 2: Review of progress against log frame

2.a Log frame outcomes

MPTF Outcome	Indicators	Assumptions – any revisions/comments?
Momentum on Global AMR Agenda sustained.	Document outlining Quadripartite collaboration for AMR in the environment	No revisions
Improved understanding of AMR risks and response options by targeted groups.	Number of countries with strengthened representation of environmental dimensions of AMR and response actions	
Increased comprehensiveness and quality of the policy dialogue and practice.	# of Member State advocates for developed Call to Action on AMR in the environment	

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/comments?
Strategic global-level governance advocacy initiatives on AMR implemented.	# of online meetings discussing interagency roles and responsibilities	HQ level inter-organization meetings conducted. Regional consultations conducted via email.	100%	
	Report summarizing discussions and next steps of interagency roles and responsibilities on AMR and environment	HQ level inter-organization consultations completed and inputs incorporated. Regional inputs from each organization being gathered. Short-form document outlining inter-organization co-operation on environmental dimensions of AMR completed for internal use by Quadripartite organisations at regional and/or country levels.	100%	Document decided for internal use only.

Improved countries' capacities for designing and implementing AMR-related policy frameworks, investment plans and programmes	Awareness raising and capacity development approach developed	Awareness raising roadmap and calendar of global AMR-related events developed. Survey to understand MPTF-countries' awareness and capacity needs in the area of environmental dimensions of AMR developed. Report under finalization.	100%	
	Interagency awareness raising series of webinars conducted	**Webinar 1**: Understanding the basics of environmental AMR for national action held on 14 June 2022. **Webinar 2**: Sources, drivers and impacts on AMR in the environment held on 7 September 2022. **Webinar 3:** Technical solutions for the prevention and control of AMR in the environment held on 27 October 2022. **Webinar 4:** Governance approaches for prevention and control of AMR in the environment held on 01 December 2022.	100%	
	# of MPTF countries receiving targeted capacity development activities	Environmental AMR Capacity Building Consultant engaged. AMR Technical Specialist for country engagement, capacity building and technical support engaged. Literature review on AMR and environment-related issues and capacity building interventions finalized. Consultations with AMR MPTF-country teams to best inform country-level capacity building activities currently conducted. Capacity building workshops with selected countries and related reports completed and	100%	

		translated for participating AMR MPTF countries. Rapid assessment tool to identify priority AMR and environment actions for NAP in draft stage for Quadripartite input.		
	Strengthened environmental component of FAO-PMP-AMR tool	Literature review on environmental dimensions of AMR and available capacity building interventions drafted. Antimicrobial Resistance programme Specialist and Quantitative Risk Assessor engaged to strengthen FAO-PMP-AMR tool.	100%	
Engagement plans with critical stakeholders' groups implemented.	Number of Member States joining in "friends against AMR in the environment" group	Assisted to the GLG statement on reducing antimicrobial discharges. Contributing to GLG working group on environment.	100%	
	Number of side events increasing visibility of environmental dimension of AMR	Organized participation in World Water Forum 9 as member of the Board of Governors of the World Water Council, and delivered the 'One Water One Health' Webinar held on 24 March 2022; with over 228 participants.	100%	

Risk matrix – any changes?

Risk description	Risk Category	Worst case consequence for the project	Risk Score		Mitigating action	Action owner
			Impact	Likelihood		
Low continuity due to the changes in the government delegates or administrative structure.	Contextual	Waste of project resources and ineffective project implementation.	Low	Low	Sensitize countries about the importance of the effective implementation of the project.	Technical focal points
Weak communication strategy that will impact the timely dissemination of results/key messages/findings about the project.	Programmatic	Results will be limited or fall short of expected outcomes.	Low	Low	Close and regular monitoring of progress and deadlines.	Technical focal points
Conflicting priorities at national level diminishing support to environmental considerations due to lack of understanding of interconnections with AMR.	Contextual	Inefficient implementation and constrained coordination of activities.	Low	Low	Engage with the policymakers at the early stage of the project and to involve them in the development of the targeted capacity development to ensure their "buy-in".	Technical focal points
Lack of commitment from the beneficiaries.	Contextual	Results will be limited or fall short of expected outcomes.	Low	Low	Sensitize FAO Members about the importance of the effective implementation of the project.	Technical focal points
Miscommunication between organizations, AMR-MPTF and coordinators on global project vs technical component timelines.	Programmatic	Delivery will be inhibited and resources frozen for full project implementation	Low	Low	Ensure regular communication between technical teams, focal points and Quadripartite Joint Secretariat	Technical focal points and QJS
Delays in implementation due to COVID-19 pandemic.	Programmatic	Inefficient implementation and constrained coordination of activities.	Medium	Low	Utilize novel and electronic methods for implementation of the project.	Technical focal points