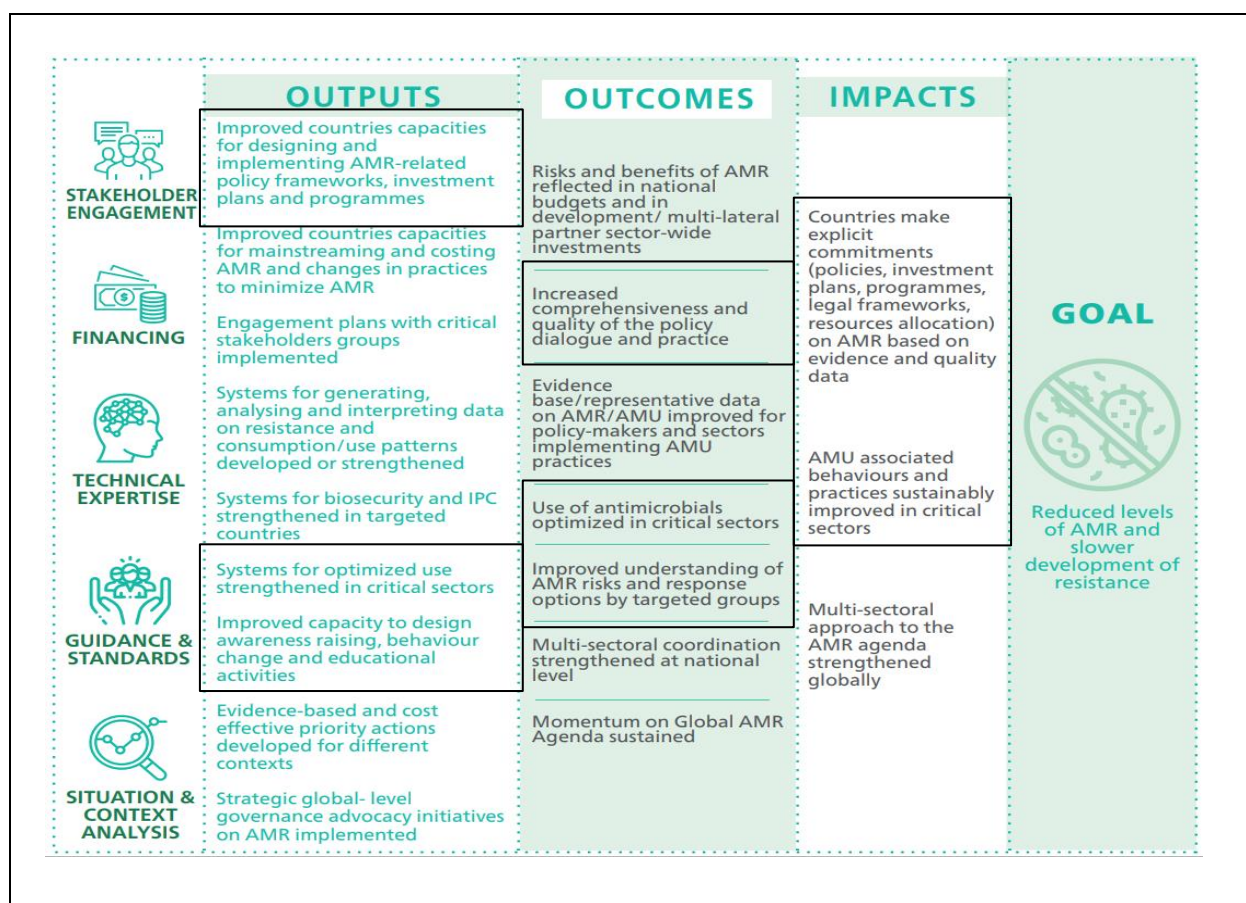


Country profiles

Table 1: Overview

<p>Project description</p> <p>Project: Enhancing governance and coordination mechanisms to reduce antimicrobial resistance in Cambodia (ID:00124430)</p> <ul style="list-style-type: none">- Duration: 36 months (19 October 2020 to 19 October 2023, including 12-month no-cost extension) <p>Activities under the Multi-Partner Trust Fund (MPTF) project (hereafter known as the project) focussed on strengthening governance and coordination between and within ministries, regulating antimicrobial use (AMU) in the human and animal health sectors and increasing public awareness and advocacy.</p> <p>In order to achieve the goal of <i>reduced levels of AMR and slower development of resistance</i> laid out in the tripartite results matrix the project in Cambodia focused on the respective impacts of <i>countries make explicit commitments on AMR based on evidence and quality data and antimicrobial use associated behaviours and practices sustainably improved in critical sectors</i>, with associated outcomes of:</p> <ul style="list-style-type: none">A. Increased comprehensiveness and quality of the policy dialogue and practiceB. Use of antimicrobials optimized in critical sectorsC. Improved understanding of AMR risks and response options by targeted groups <p>The three respective outputs (prioritized by Cambodia from the results matrix) contributed towards four strategic areas in the Cambodian Multi-Sectoral Action Plan for AMR 2019-2023 (MSAP-AMR), and were carried by the Cambodia Centre for Disease Control, Ministry of Health (CDC, MoH) and General Directorate of Animal Health and Production, Ministry of Agriculture, Forestry and Fisheries (GDAHP, MAFF) with inputs from the Ministry of Environment, - in collaboration with the Tripartite FAO-WHO-WOAH who each received funds from the MPTF (see financial report).</p> <p><u>Output A:</u> Improved countries capacities for designing and implementing AMR-related policy frameworks, investments, plans and programmes (CDC in collaboration with WHO)</p> <p><u>Output B:</u> Systems for optimized use strengthened in critical sectors (activity B1: AMS in hospitals CDC in collaboration with WHO; B2 & B3 review of AMU and development of responsible use in animal health sector and AMS (GDAHP in collaboration with FAO)</p> <p><u>Output C:</u> Improved capacity to design awareness raising, behaviour change and educational activities (GDAHP in collaboration with WOAH)</p>



Project progress:

On 23 December 2019, the Royal Government of Cambodia launched the multi-sectoral action plan (MSAP) on AMR (2019–2023), reflecting a One Health approach to collaborative interventions to address the AMR threat. The MSAP was jointly prepared by the Ministry of Health, the Ministry of Agriculture, Forestry and Fisheries, and the Ministry of Environment and encompasses seven strategic areas to address AMR in human health, agriculture, and the environment. The MSAP-AMR provided the framework for the MPTF design which then contributed significantly to its implementation.

Output A: Improved country capacity for designing and implementing AMR-related policy frameworks, investment plans and programmes

Activity A1: The original output stated that an ‘inter-ministerial coordination committee on AMR’ would be established. However, during the project cycle a inter-ministerial coordination committee on One Health (IMCC-OH) was discussed and agreed upon as a more overarching and necessary mechanism. Hence the original draft terms of reference (ToRs) for the IMCC-AMR were revised into an operational coordination mechanism to be under the IMCC-OH, entitled the Multi-sectoral AMR technical working group (MS-AMR-TWG) with close links to sectoral working groups on AMR. The membership and TOR of the MS-AMR-TWG have been written and agreed among the technical group. The Ministries are awaiting final endorsement before they can meet. Each Ministry also has its own TWG. The MAFF and MOE AMR technical working groups were founded in 2017 and 2020, respectively. The original working group was small in scope. The membership and scope of the AMR TWG have been amended by both in

response to their encouragement and participation in the AMR MPTR initiative, which is being promoted by tripartite. The AMR working groups of MAFF 2022 and MOE 2021 have updated their work scope to include crops, fisheries, agro-industry and academia.

A2: A draft national M&E framework for the MSAP on AMR was developed, then revised based on consultative workshops and with support from the AMR Global M&E project. In addition, representatives of the three Ministries received M&E training from the global project in June 2023. The three ministries reviewed the final draft of the framework, and it was provisionally launched at the project close-out workshop in October 2023. However, it is under review by a project evaluation expert who is responsible to support Government conduct the review of the MSAP (supported by GiZ). The current timescale of the MSAP-AMR ends in December 2023 and the draft framework will assist significantly with review of the current plan, as well as development of M&E framework for the next phase of MSAP-AMR from 2024.

A3: A national consultancy supported the development of relevant regulations and road maps to implement the legislative framework. AMR-related items were integrated into this draft law on the management of health products. National stakeholder workshop was then held to review the draft regulations and road map for implementation in September 2022. As part of legal support, a one health legal assessment tool of AMR-relevant legislation has been piloted in Cambodia, this tool serves for the assessment of national legislation relevant for AMR across sectors, identification of weakness and opportunities for the legal reform and contribution to One Health integration in AMR governance and legislation. A further workshop in August 2023 was conducted to validate the report on the findings of the implementation of the One Health Legislative Assessment Tools for AMR. A number of recommendations have been made as a result of this work and the next steps highlighted. Through the Quadripartite MPTF legal project, a legal analysis of the human health legislation relevant to AMR has been undertaken and the results shared with the Cambodian Government for their feedback. This work is ongoing.

A4: A national multisectoral workshop was organized in January 2023 to review the progress of implementing the MSAP-AMR (2019-23). The main recommendation was to systematically evaluate the implementation of the current plan and to guide updates of the future MSAP-AMR from 2024.

Output B: System for optimized use strengthened in critical sectors

B1: Both National Policy Guidelines for AMS and National AMC surveillance guidelines have been developed, finalised and published. An assessment of the AMS program implementation on both the national and healthcare facility-level (4 hospitals); and a training of trainers (ToT) on AMS was completed in March 2023 by staff from 5 provincial hospitals. Point prevalence surveys (PPS) were conducted at 18 provincial hospitals during the project. During the national AMS/PPS implementation experience sharing workshop in February 2023 (50 participants), participants noted they needed further training on doing PPS. This refresher training was conducted in August 2023 for all provincial hospitals, with 36 participants and by end of the project 23 of the 25 provincial hospitals had conducted at least one PPS, with many conducting surveys every six months. The AMS guidelines were also rolled-out in five provincial hospitals that had not previously participated in AMS/PPS between September-October 2023. PPS data from these five hospitals showed that between 50-71% of patients surveyed were on antimicrobials and that only 31% to 57% were guidance compliant. Finally, the pre-service curriculum for AMS has also been drafted and is currently under final review by the University of Health Sciences in collaboration with the Department of Hospital Services, Ministry of Health.

B2: An integrated review on antimicrobial use (AMU) in the animal health sector and antimicrobial stewardship (AMS) good practice. A team comprising national and international experts dedicated substantial time and effort to meticulously review literature and guidelines relevant to antimicrobial use and resistance in both animal health (swine, poultry) and aquaculture sectors. Through the comprehensive review process, the experts scrutinised 996 scholarly documents and conducted in-depth analysis and assessment. The results of the analyses have been used to recommend for developing treatment guidelines for responsible and prudent AMU in the animal sector. Follow-up activities were continuing on development of responsible and prudent use guidelines in animals (AMU) and road map toward its implementation in the animal health sector.

B3: Two treatment guidelines on responsible and prudent AMU in poultry and swine have been drafted and endorsed. A training package based on the responsible and prudent antimicrobial use guidelines in poultry and Swine was developed for nationwide pilot training. A two-day nationwide pilot training was organized to assess the applicability of guidelines with 101 (15 women) provincial and district veterinarians and 103 (13 women) Village Animal Health workers (VAHW). In addition, training modules on good practice towards the responsible use of antimicrobial in pig sector which was developed by the Royal University of Agriculture (RUA) under support from Fleming Fund have not been endorsed; however, by utilising the MPTF fund conducted the technical revision and clearance on the training modules.

B4: A One Health workshop to collate information on AMS as well as AMU practice, challenges and progress made in Cambodia was conducted with participation of around 60 stakeholders from the human, animal, agriculture, food and environment sectors.

In addition, with support from the FAO-Headquarters legal team—to implement the One Health Legislative Assessment Tool for Antimicrobial Resistance. The tool was to assess in all relevant sectors, the national legislation relevant to AMR against international standard, with a view to determine key legislative gaps, to make recommendation for strengthening the legislative frameworks, and assist the government authorities in establishing priority areas, including the governance mechanism for AMR, human health, food safety, animal health, pesticides, plant health and the environmental dimension relevant to AMR.

Output C: Improved capacity to design awareness-raising, behaviour change and educational activities

There were three broad activities included under the outcome and output to improve understanding of AMR risks and raise awareness and bring behaviour change. WOAHA Regional Representation for Asia and the Pacific was responsible for implementing these activities together with the General Directorate for Animal Health and Production (GDAHP) under the Ministry of Agriculture, Forestry and Fisheries (MAFF).

Activity C1: Develop national multisectoral AMR communication strategies focusing on the targeted groups.

The GDAHP developed “the National AMR Communication Strategic Plan for Cambodia (NACSP, 2024-2026)” through a national consultancy and in close consultation with the Technical Working Groups (TWGs) of Ministry of Agriculture Forestry and Fisheries (MAFF), Ministry of Health (MOH) and Ministry

of Environment (MOE), and the Tripartite. The NACSP outlines the key strategies and activities for effective communication on AMR and AMU in human, animal, and environment sectors.

Activity C2. Develop and disseminate IEC materials on AMR in Khmer Language for campaigns, including but not limited to World Antimicrobial Awareness Week (WAAW)

Awareness materials

Two videos on AMR focusing on the responsible and prudent use of antibiotics in poultry and fish farms in Cambodia (in Khmer with English subtitles) together with a video focussing on using one health approach in addressing AMR were developed. A total of 6 posters, 4 leaflets and 3 social media infographics were developed to provide strategic messages on responsible use of antimicrobials in animals and to create public awareness on AMR. These awareness materials were developed targeting audiences across the AMU supply chain from policy makers to end users of antimicrobials such as animal producers, farmers, pharmacists, clinicians, and competent authorities in English and Khmer languages.

Enhancing Awareness at all levels of AMU supply chain – from policy to end users of antimicrobials

The awareness materials developed were used at various platforms to disseminate information about AMR and AMU across the whole spectrum of the AMU supply chain.

During the **World AMR Awareness Week (WAAW)** in 2021, 2022, and 2023, a total of 15 awareness events were organized at national and sub-national levels targeting policy makers, government agencies, private sectors (animal producers, medicine importers, distributors, retailers), veterinary and medical officers, veterinary and medical students, village animal health workers, and general public. The GDAHP with support from WOAHRAP, MoH, MoE, Tripartite, and other governmental agencies organized these events that included more than 1100 personnel covering the provinces of Phnom Penh, Battambang, Siem Reap, Kampong Cham, Kampong Speu, and Takeo. The awareness events were also held at the Royal University of Agriculture, Kampong Cham National Institute of Agriculture, Prek Leap National Institute of Agriculture, Institute of Technology National at Phnom Penh. Awareness materials such as posters, leaflets, and videos on responsible use of antimicrobials were distributed at these events.

Enhancing awareness and engagement of the private sector

The GDAHP organised one national and three sub-national seminars on “Containment of Antimicrobial Resistance in the Livestock & Aquaculture Industries in Cambodia”, and were held on 14-26 July 2022 at Phnom Penh, Battambang, Siem Reap and Takeo provinces. A total of 263 participants including livestock and aquaculture farmers, animal feed sellers, veterinary medicine sellers, veterinarians, and village animal health workers in 4 provinces were made aware of WOAHR Standards on responsible and prudent use of antimicrobials, national legislations on AMR/AMU in Cambodia, and good practices in animal health and production. In 2023, similar seminars were held at Pursat, Kampong Chhnang and Prey Veng provinces covering 148 private sector personnel working on livestock production activities. The participants brainstormed how to implement good practices to minimize use of antimicrobials in livestock and aquaculture industries in Cambodia and how to strengthen the public-private partnerships in prudent/responsible use of antimicrobial agents in animals.

Enhancing awareness of veterinary students, veterinarians, veterinary paraprofessionals and village animal health workers

As the veterinary students are the future guardians of antimicrobials in Cambodia, a seminar was held on 4 September 2023 at Phnom Penh to highlight the roles of veterinarians, veterinary students, veterinary paraprofessionals, and village animal health workers in addressing the threat of AMR in Cambodia. The WOAHP competency and curriculum guidelines for veterinarians and veterinary paraprofessionals were highlighted for the veterinary education establishments to consider including in their curricula to enhance the quality of education related to AMR.

C.3 Joint national multi-sectoral workshops on AMC and AMU Monitoring amongst the key stakeholders

It is important to monitor the use of antimicrobials in animals to identify the stakeholders involved in the regulation and oversight, identify the key stakeholders engaged in import, production, distribution, retail and sale of antimicrobials across the AMU supply chain, and identify the type of AMU data that can be collected and reported to national database and finally to WOAHP.

With technical and financial support of WOAHP RRAP, GDAHP organised the second workshop on monitoring the quantities and usage patterns of antimicrobials used in animals on 27th and 28th April 2022 in Cambodia. A total of 64 participants from the government regulating agencies, private sectors (importers, manufacturers, distributors, retailers, associations etc.) and academia attended to understand the current state of play including the gaps in collection, analysis and sharing of AMU data with the government. The AMU supply chain of 2018 was updated and key priority points were discussed to enhance AMU data collection and sharing with GDAHP and finally with WOAHP.

Final Close-Out of MPTF

The close-out workshop of the MPTF-AMR project was held in October 2023, with the global MPTF-AMR coordinator in attendance. MoH and MAFF attended – national and sub-national levels as well as tripartite agencies and partners. There were over 30 participants from across the sectors and good engagement to discuss successes and challenges over the course of the MPTF. The remaining priorities and future direction were also discussed.

Main challenges

The start of implementation of activities was delayed primarily due to the COVID-19 pandemic. Community outbreaks and increasing cases of COVID-19 led to the country being locked down, preventing physical meetings and restricting travel both locally and internationally. Government priorities (particularly MoH) shifted to COVID-19. Though virtual means were used for discussion about project implementation, the project team had difficulties to collect feedback via virtual means, often due to poor internet quality or power cuts.

There was a significant lack of awareness and limited capacity across Ministries (including healthcare professionals) on all aspects of AMR, AMS, AMC and AMU although this improved during the lifetime of the project.

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

Delays due to Covid-19 led to a request for a 12-month no-cost extension which was approved in July 2022 allowing for the delivery of all major outputs.

Learning Innovation

The project forged stronger collaboration among government counterparts as well as the tripartite partners (WHO, FAO, WOAHA). Prior to the MPTF the multi-sectoral collaboration on AMR spearheaded the One Health approach in Cambodia – and this progressed throughout the implementation period of the MPTF. There was coordination with other projects and events (e.g. UK Fleming Fund) which ensured synergies, complementarity of technical and financial resources, thus preventing duplication. It has contributed to action track 5 of the One Health Joint Plan of Action.

Going forward the MPTF project will assist the update of the MSAP-AMR for 2024 and beyond, for example through the M&E framework which was drafted as one of the activities. It will guide new projects in their design. The German Development Bank (KfW) has confirmed a substantial investment in One health with a focus on AMR starting in 2024/25, and many of the products created under MPTF will be relevant for this project.

On broader One Health, Cambodia had a successful Pandemic Fund application that will focus on laboratory, surveillance and workforce development with some components on AMR included in the proposal. Likewise, World Bank is also supporting various initiatives on One health.

The communications strategy – including behaviour change – supported under the MPTF has shown that there is an enormous need to build awareness among government, health professionals and down to community level - as many still do not understand and thus underestimate the impact of AMR – both current and future. This would be a focus of a phase 2 MPTF-AMR proposal for Cambodia, as risk communication and community engagement is an under resourced area.

Table 2: Review of progress against log frame

2.a Log frame outcomes

MPTF Outcome	Indicators	Assumptions – any revisions? Put here
Increased comprehensiveness and quality of the policy dialogue and practice	Number of countries whose AMR Multisectoral Coordination mechanisms engage with a broad range of relevant partners	
Use of antimicrobials optimized in critical sectors	Number of countries that implemented one or more (additional) international instruments on AM	

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. Improved countries capacities for designing and implementing AMR related policy frameworks, investments plans and programmes	A.1 National coordination mechanism for the AMR established	IMCC-AMR TOR drafted, and a consultative meeting was held with stakeholders. Members nominated – yet to meet formally.	75%-99%	The 'inter-ministerial coordination committee' was changed to a 'multi-sectoral technical working group' – which itself reports to the recently created IMCC for One Health.
	A.2 The National M&E Framework for the MSAP developed	M & E framework drafted and consultative meeting held with stakeholders. Some issues with finalisation of indicators by project close	75%-99%	GiZ evaluation will review M&E framework and further consultation envisaged (under other funding)

	A.3 The regulatory framework has been reviewed in line with the related international guidance on responsible and prudent use of antimicrobial agents	<p>Reviewed the Law on Management of Health Products.</p> <ul style="list-style-type: none"> - The law covers all sectors. MoA previously issued a law on animal health and veterinary services, so the laws need to be harmonized. <p>Integrated AMR-related items into this draft law.</p>	75%-99%	
	A.4 Joint One Health meeting to discuss the MSAP progress and the MPTF implementation in Cambodia	A national multisectoral workshop was organized to review the progress of the MSAP on AMR, in Cambodia in terms of progress, challenges, lessons learned, and the way forward, along with the MPTF project implementation with representatives from the 3 sectors and the Tripartite organizations & other development partners.	100%	
B. Systems for optimized use of antimicrobials strengthened in critical human and animal sectors	B.1 Antimicrobial stewardship program implemented in additional health care facilities	AMS guidelines have been implemented in 23 of the 25 hospitals with all of them completing at least 1 PPS since being trained.	100%	
	B.2 Integrative review on antimicrobial use in Animal health sector and antimicrobial stewardship	<p>The literature review of the existing AMR & AMU documents, studies, and guidelines in the country and neighbouring countries has been completed. <i>Following the experts' meeting were conducted at the end of 2022.</i></p> <ul style="list-style-type: none"> - <i>The meeting involving stakeholders in the AMR and AMU areas was organized to get more insights and discuss the key findings and</i> 	100%	

		<p><i>recommendations for guidelines development.</i></p> <ul style="list-style-type: none"> - <i>The report of the AMR and AMU reviews have been shared, which allowed for the integration of human health in what could be viewed as the report of the two sectors.</i> 		
	<p>B.3 Development of responsible and prudent use guidelines in Animals (AMU) and road map toward its implementation in animal health sector</p>	<p>The General Directorate of Animal Health and Production (GDAHP) developed two treatment guidelines of responsible and prudent antimicrobial use for animals and a road map towards their implementation. The assignment was to:</p> <ul style="list-style-type: none"> - <i>Development of treatment guidelines for Swine and Poultry</i> - <i>Conducting participatory meeting with relevant stakeholders (public and private) under development process</i> - <i>Develop training package based on the responsible and prudent antimicrobial use guidelines in poultry and Swine</i> - <i>Nationwide pilot trainings on developed guideline to national and sub-national veterinarians</i> 	100%	
	<p>B.4 Joint One Health meeting the discuss antimicrobial stewardship and good practices in critical sector</p>	<p>With collaboration with the General Directorate of Animal Health and Production (GDAHP) to:</p> <ul style="list-style-type: none"> - <i>Organized joint One Health workshop to discuss and conclude on the AMS/AMU progress in Cambodia with participation of</i> 	100%	

		<p><i>around 60 stakeholders from the human, animal, agriculture, food and environment sectors.</i></p> <p>With support from the FAO-Headquarter legal team:</p> <ul style="list-style-type: none"> - <i>Implemented One Health Legislative Assessment Tool for Antimicrobial Resistance. The tool was to assess in all relevant sectors, the national legislation relevant to AMR against international standard.</i> 		
C. Improved capacity to design awareness raising, behaviour change and educational activities	C.1 Communications strategies developed	The GDAHP developed “the National AMR Communication Strategic Plan for Cambodia (NACSP, 2024-2026)” through a national consultancy and in close consultation with the Technical Working Groups (TWGs) of Ministry of Agriculture Forestry and Fisheries (MAFF), Ministry of Health (MOH) and Ministry of Environment (MOE), and the Tripartite.	100%	
	C.2 IEC materials developed and used for nationwide AMR campaigns	Two animated videos on AMR focusing on the responsible and prudent use of antibiotics in poultry and fish farms in Cambodia (in Khmer with English subtitles) together with a video focussing on using one health approach in addressing AMR were developed. A total of 6 posters, 4 leaflets and 3 social media infographics were developed to provide strategic messages on responsible use of antimicrobials in animals and to create public awareness on AMR.	100%	

	C.3 Joint national multi-sectoral workshops on AMC and AMU Monitoring amongst the key stakeholders	GDAHP organised the second workshop on monitoring the quantities and usage patterns of antimicrobials used in animals in 2022. A total of 64 participants from the government regulating agencies, private sectors and academia attended to understand gaps in collection, analysis and sharing of AMU data with the government	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	High	High	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	Medium	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	Low	Continuous follow up and identification of focal points at HQ/Regional/National tripartite offices.	Tripartite

Annex



Caption: the commonly used photograph for MPTF-AMR globally is a group of children in rural Cambodia



Caption: Opening ceremony of the close-out workshop 'Let us discuss success' on 2-4 October 2023



Caption: The participatory meeting at sub-national level to validate the practicality of the treatment guidelines



Caption: Community awareness at Sangke district, Battambang province during WAAW on 22 November 2022.



Caption: warm-up event for WAAW in Phnom Penh on 6 October 2023, targeting university students



caption: Distribution of AMR awareness posters to pig farmers in Kep province

