

The Antimicrobial Resistance (AMR) MULTI-PARTNER TRUST FUND

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

Country Proposal Submission TEMPLATE

Full proposal overview

Country	Ghana
Project title	Ghana One Health Antimicrobial Resistance Multi-Party Trust Fund (MPTF) Project
Implementing entities	World Health Organization (WHO), Food and Agriculture Organization (FAO), World Organization for Animal Health (OIE), Working with country implementing agencies in various sectors in the spirit of 'One Health' as detailed in section for Other Implementing Partners below.
Timeframe	24 months – (approximately starting June 2021)
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Other Implementing Partners	<p>Ministries Departments and Agencies</p> <ol style="list-style-type: none"> 1. Ministry of Health (MOH) 2. Ministry of Food and Agriculture (MOFA) 3. Ministry of Fisheries and Aquaculture Development (MOFAD) 4. Ministry of Environment, Science, Technology and Innovation (MESTI) 5. Food and Drugs Authority (FDA) 6. Pharmacy Council 7. National Health Insurance Authority (NHIA) 8. Council for Scientific and Industrial Research (CSIR) - Water Research Institute 9. Environmental Protection Agency (EPA) <p>Tripartite partners</p> <ol style="list-style-type: none"> 10. World Health Organisation 11. World Organisation for Animal Health 12. Food and Agriculture Organisation 13. Other UN organizations or partners: UNDP, UNICEF <p>AMR Country governance structures</p> <ol style="list-style-type: none"> 14. AMR Inter- Ministerial Committee 15. National AMR Platform 16. AMR Secretariat and Offices of Sector Focal persons <p>CSOs and the Media</p> <ol style="list-style-type: none"> 17. Civil Society Organisation (health, environment, animal, consumer protection, media) <p>Academia and Research Organisations</p> <ol style="list-style-type: none"> 18. Kwame Nkrumah University of Science and Technology (KNUST) 19. Medical Microbiology Department, University of Ghana 20. Noguchi Memorial Institute of Medical Research (NMIMR) 21. Kumasi Centre for Collaborative Research in Tropical Medicine (KCCR) <p>Private Sector</p> <ol style="list-style-type: none"> 22. Pharmaceutical Society of Ghana (PSGH) 23. Community Practice Pharmacists Association (CPPA) 24. Veterinary, Farmers, Fish farmers and Abattoir Associations
Budget	
<i>Total amount (USD) based on budget summary in Annex</i>	USD 1,000,000 One million United States Dollars
<i>Total amount (USD) allocated to each Tripartite partner</i>	USD 393,255 for the World Health Organisation (WHO) * USD 303,886 for the Food and Agriculture Organisation (FAO) USD 302,859 for the (OIE) * (includes USD 303,493 WHO budget and cross-cutting coordination, preliminary and related cost of USD 89,762), as detailed in Annex 3 - Budget Summary and Appendix 1 - Budget Details.

<p>Background</p>	<p>AMR context in Ghana and rationale for responding to AMR NAP and MPTF objectives</p> <p>The problem of Antimicrobial resistance (AMR) is widespread globally posing serious challenges to the management and control of infections in humans, animals, and the environment.</p> <p>A review of antibiotic resistance in the Food Chain from a developing country perspective, showed that AMR is a known global public health challenge with severe health and socioeconomics repercussions, which is significantly influenced by antibiotic use in food animals (1).</p> <p>The WHO reports that, about 440 000 new cases of multidrug-resistant tuberculosis emerge annually, leading to at least 150 000 deaths. Extensive drug-resistant tuberculosis has been reported in 64 Countries. There is also a high percentage of hospital-acquired infections caused by extremely resistant bacteria such as Methicillin-Resistant <i>Staphylococcus aureus</i> (MRSA). AMR has become a challenge for the treatment of gonorrhoea and many other infections even involving “last-line” oral cephalosporins. (2)</p> <p>In Africa, antibiotics are among the commonest prescribed medicines. A survey on predictors of antibiotic use in five countries in Africa showed that 90% of individuals with acute illness sought care outside the home with 95% receiving medicines and 36% receiving antibiotics. Over 30% of patients accessed antibiotics without prescription (2) (3).</p> <p>A study on the situational analysis of antibiotic use and resistance in Ghana on policy and regulation noted various systemic challenges that may have contributed to the development and spread of AMR (4). Other studies across Ghana have proved the existence of resistance to commonly used, affordable and available antimicrobials such as tetracycline, co-trimoxazole, ampicillin etc. (5). High prevalence of Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA) was recorded in body fluids from various parts of the human body in a study carried out among patients in some health facilities in Ghana (3).</p> <p>In the veterinary, food, fisheries and aquaculture sectors, antimicrobials are used for prophylaxis and treatment against infections and for other purposes to enhance growth of animals. The non-therapeutic use of antimicrobials and residues in the food chain also contribute to the development of resistance (6) (7). Bacteria isolated from livestock, poultry and their products, surfaces of tables and knives at slaughter houses, showed strains of <i>Campylobacter</i>, <i>Escherichia coli</i> and <i>Salmonella</i>, resistant to commonly used antimicrobials such as ampicillin, tetracycline, cefadroxil, erythromycin, cefotiam, penicillin (8).</p> <p>A disease management study among 110 pig farms in the Ashanti region of Ghana revealed that injectables like tetracycline, sulphadimidine,</p>
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benzylpenicillin, and dihydrostreptomycin were overly used in the management of diarrhoea, rashes and coughs. The study also revealed unsafe storage and disposal practices for these medicines among farms in Ghana. Knowledge, perceptions and practice on withdrawal times before slaughter were also a major gap identified among some livestock farmers in Ghana (8) (9). The factors driving the development and spread of antibiotic resistance are rife in pig farms in the Ashanti region and appropriate education and veterinary interventions are needed to prevent the emergence and dissemination of resistant bacteria in pork and pig farm communities. High incidence of tetracycline residues has also been found in chicken meat samples (10). This overly compounds the risk of AMR development especially for such antibiotics, which are also used in humans.

The Veterinary Public Health and Food Safety Unit as well as the Veterinary Services Directorate (VSD) are presently the units responsible for preventing zoonotic diseases in humans and ensuring food safety in Ghana. Though playing an important role in the food chain, these units are poorly resourced to carry out their mandate. Public knowledge of the services provided by these units as well as the prioritisation of AMR, associated with implementable action, in these units have been minimal.

In crop production, fungicides are the most common antimicrobials used against diseases and pests. The replacement of existing fungicides with new ones at regular intervals may be an indication of development of resistance by pests and diseases. No studies have been identified showing fungicide levels in crops and vegetable farms in Ghana.

The Food and Drug Authority (FDA) of Ghana is the regulatory agency responsible for market authorisation, registration and certification, post-market surveillance and quality assurance of all medicines and medical devices and also regulates imports of veterinary medicines. The post-market surveillance of animal health products needs to be strengthened.

Until recently, the effects of AMR on the environment had not been thoroughly considered in the fight against AMR. Meanwhile, studies have revealed that about 80% of the antimicrobials used in aquaculture enter the environment with their activity intact, where they select for bacteria whose resistance arises from mutations, or more importantly, from mobile genetic elements containing multiple resistance determinants transmissible to other bacteria (11).

There is an MOH waste management policy developed in 2006 (current version being the 2020 edition), that seeks to ensure that, health care waste is managed effectively in compliance with existing laws and regulations. The FDA is responsible for the disposal of pharmaceutical waste including antimicrobials. Waste management in the food, agriculture and fisheries sectors, has not received the attention it deserves. The Environmental Protection Agency (EPA), the body mandated to ensure safety in the environment in Ghana by law, has had its activities

skewed towards pesticide safety in the environment more than waste. The local government department also deals with waste of all types.

National response to AMR in Ghana

The Ministry of Health (MOH) in collaboration with the Ministries of Food and Agriculture (MOFA), the Ministry of Environment, Science, Technology and Innovation (MESTI), as well as the Ministry of Fisheries and Aquaculture Department (MOFAD), with their respective agencies; the Action on Antibiotic Resistance (ReAct), the Tripartite bodies (WHO, FAO, OIE) and other organisations have systemically led the development and launch of the AMR policy and NAP based on the Global Action Plan with a monitoring and evaluation mechanism rooted in the one health approach. This is aimed at assuring safety, effectiveness and efficacy as well as ensuring the responsible use of antimicrobials and other medicines in Ghana. The national policy on AMR and AMU is in implementation with funding challenges.

Ghana incorporated the environmental sectors into its one health agenda taking into consideration the effect of improper waste management on infections. Waste can be a major source of spreading pathogenic and resistant microorganism that can lead to health and other related issues across sectors. The VSD and the Veterinary Public Health and Food Safety Unit are now actively engaged, since the AMR global and national efforts gained momentum. The AMR NAP therefore details actions to standardize antimicrobial residue in livestock and plant products.

The Ghana National Medicines Policy recommends routine monitoring of responsible use of medicines. Since 1998, the Ministry of Health has been implementing the rational use of medicines programme, with the aim of improving medicine use. Academia, through the Antibiotic Drug Use and Monitoring and Evaluation of Resistance (ADMER) project hosted by the University of Ghana Medical School, Medical Microbiology Department, generated evidence that supported the development of interventions on AMR. The FAO has also supported the animal sector to put in modalities to monitor the use and consumption of antimicrobials.

Ghana in February 2012 also formalised a multi-sectoral and a multi-disciplinary National Platform to champion activities on AMR. Membership consists of professionals from human, animal and environmental health, policy makers, academia, civil society organizations, private sector institutions and individuals among others. To ensure traction, sub technical working groups were formed to lead strategic areas in the NAP.

The NAP is informed by the need to promote responsible use, encourage convergence of effort and investment on AMR activities in human, animal, plants and environmental health. The NAP prioritises and defines strategic actions in governance, awareness creation, surveillance, infection prevention and control, optimised use, research and development, and making investment in the areas of AMR. Activities within these strategic

areas are linked such that there is holistic fulfilment of the aspirations expressed in the NAP.

A mainstreaming document was also developed to support ministries, agencies and departments (MDAs) to include AMR activities in their strategic plans and programmes of work (POW) to enjoy institutional funding. In as much as some MDAs may indicate traction, this has however not been monitored to determine the level of compliance; and actual government funding remains undetermined.

Main achievements and gaps for AMR

Ghana's effort at controlling AMR began with implementing and monitoring antibiotic prescribing in the public hospitals. The level of OPD prescribing of antibiotic has seen an average consistent decrease. Through the implementation of the rational use of medicines programmes by the MOH, the percentage of encounters with an antibiotic prescribed at the out-patient department (OPD) level has reduced from 56.3% in 1999 to 41.4% in 2015 (12). This gives clear evidence of effective interventions reducing AMU.

A knowledge, attitude, behaviour and practice (KABP) study on antimicrobials was also carried out among health professionals (13) and Civil Society Organisations (CSOs) in 2015 (14). These studies in addition to laboratory studies of resistance by the University of Ghana, Medical Microbiology Department, provided evidence for policy decisions on the AMR policy.

A national policy on AMR and use has been developed and launched to give focus to AMR in country. A National Action Plan on AMR that gives interpretation and action to the policy has also been developed. AMR activity enjoys political support at the level of the presidency. The President of the Republic and Deputy Chair of the SDGs launched both documents.

In the area of governance, AMR Secretariat and Inter-ministerial Committee of implementing agencies has been established with clear terms of reference. Focal persons for the AMR Secretariat and some agencies have been identified to coordinate AMR activities as recommended by the AMR Policy and NAP. There is also an active National AMR Platform in One Health. The tripartite bodies provide technical support to these structures. These bodies are to ensure effective governance of AMR in country.

The National Platform in collaboration with the tripartite and CSOs, have consistently organised the annual AMR awareness week celebration in a one health approach. Sensitisation and trainer of trainers' session were held for CSOs in health, non-health actors, poultry farmers, media practitioners in health and schools.

The FAO in collaboration with MOFA and Veterinary Services Directorate (VSD) have also established Farmer field schools aimed at responsible use of antimicrobials in farm animals. The VSD also contributes data annually to the OIE on the use of antimicrobials in animal health.

Ghana also participates in the Fleming Fund Laboratory Surveillance project, which seeks to establish a system for laboratory surveillance of resistance and consumption in humans and animals.

The WHO continues to support the Tricycle ESBL *Escherichia coli* project in animal, human and environmental health.

The FAO supported an assessment of legislation relevant for AMR and AMU in Ghana. This is aimed at providing evidence for legislation on some aspects of AMR and AMU and falls in line with the Presidential call for legislation on some aspects of rational use. While this is strategic for AMR interventions in Ghana, the FAO also supported the initial concepts for mainstreaming of NAP activities in Ghana as well as the development of the Monitoring and Evaluation framework of the Ghana AMR National Action Plan.

Some activities are ongoing with Tripartite and other donor support. Major gaps however, still exist in implementation mainly because of funding. The AMR Multi Partner Trust Fund (AMR MPTF) provides good opportunity to implement cross-cutting activities with catalytic effects that delivers on implementing the NAP and responds to the outcomes and impacts expected by the MPTF. The outputs identified in the MPTF synchronizes with activities in the NAP of Ghana in one health. Full implementation will contribute to the aspirations of the SDG and UHC.

Relation of the AMR programme to national plans, policies and strategies

Government's priority is to deliver on SDGs, ensure UHC, food security and safety for its citizens in a safe and healthy environment necessary for continued improved productivity. This is planned to be achieved through primary health care, equitable access to safe, effective and efficacious essential medicines including antimicrobials for its programs, health insurance scheme; implementing food security and biosecurity measures in the flagship program on planting and rearing for food and jobs; environmental sanitation; reducing morbidity and mortality as well as improving country's preparedness for health threats.

To ensure tracking and accountability, government has included some AMR activities in the 40-year national development plan, and included AMR indicators into the country SDG plans. AMR is captured in Ghana's One Health Strategic Framework document developed with support

	<p>from the WHO. AMR is also captured in International Health Emergency document of Ghana and also part of the annual work plan for the MOH.</p> <p>Summary and linkages with related ongoing AMR efforts</p> <p>The Tripartite (WHO, FAO, OIE) in collaboration with the MOH, academia, and Civil Society Organisations jointly organised and celebrated the 2019 World Antibiotic Awareness Week (WAAW). The Tripartite provided funding and technical support.</p> <p>The Fleming Fund Laboratory Surveillance project hosted by the University of Ghana (ORID) is developing systems to establish a laboratory and antimicrobial consumption surveillance system and focusing on 10 sentinel sites across the country, mainly in response to the strategic objective 2 of the NAP. This project is ongoing with funds from the Fleming Fund. The Tripartite provides technical support by being part of the oversight committee of the project in Ghana.</p> <p>ESBL Tricycle <i>Escherichia coli</i> project funded by the WHO in one health is ongoing among the human, animal and environmental health.</p>
<p>Status of National Action Plan for AMR</p>	<p>Development of the Ghana AMR NAP</p> <p>The 5-year NAP was developed with guidance from the Global Action Plan (GAP) and the need to contribute to food security and safety, UHC and SDGs. The document was completed in 2017 and launched in 2018.</p> <p>The NAP is in the fourth year of implementation. A WHO supported rapid desk-review of implementation of NAP showed that, out of over 144 strategic activities, 34% are ongoing while 60% had not started due to funding constraints. Only 6% of activities are completed. Reviewers recommended an independent in-depth external evaluation of the AMR Policy and NAP as a follow up to this rapid review. The period for this exercise is yet to be determined.</p> <p>The outcome and impact presented by the MPTF with the corresponding outputs and key activities aligns with the Ghana National Action Plan in one health. This linkage between the GAP, MPTF and AMR NAP allows for focused implementation. The activities will be implemented through existing systems and ongoing initiatives such as AMR governance model, extended Spectrum Beta Lactamase <i>Escherichia coli</i> (ESBL Ec.) project, Fleming Fund laboratory surveillance, Antimicrobial Consumption (AMC) surveillance, GCP/GLO/710/UK Project at FAO, with support from all sectors to assure results within the project period. Joint activities will be prioritised.</p> <p>The Ghana AMR Platform is a multi-stakeholder group of experts with interest and or whose activities has an impact on AMR. Membership includes policy makers, academia, civil society, media, microbiologist, researchers, health professional bodies, representatives from human,</p>

	<p>animal and environmental health, regulatory agencies, private institutions etc.</p> <p>The Ghana AMR Platform meets quarterly as per working agreement. The Inter-Ministerial Committee also meets quarterly. The AMR Coordinating Secretariat situated at the MoH, provides administrative support for both entities. The Secretariat reports to both the Platform and the Inter-ministerial committee as well as the Chairman for the Platform and the Minister of Health who is the coordinating Minister for AMR issues. Normally, the National Platform meets before the Inter-Ministerial Committee to consider items presented by the technical working groups of the platform for decisions.</p> <p>By the end of the 5th year i.e. ending of 2022, the NAP would be reviewed at end-term, with pending actions updated and rolled over for the next phase of NAP interventions. In doing so, priority would be given to continuity in the purpose and intent of the actions as well as continuation of those actions that were not implemented in the first 5 years. This would considerably reduce risk with ongoing work around the NAP.</p> <p>The implementation of the NAP is guided by the AMR platform; and the AMR Secretariat coordinates the AMR platform.</p> <p>The Tripartite organisations' support to the NAP have mainly funding and technical support with accompanying active participation in activities. The WHO recently supported the AMR Secretariat with office logistics to improve coordination of AMR activities.</p>
Project Summary	
Impact	<ol style="list-style-type: none"> 1. Countries make explicit commitments on AMR based on evidence and quality data. 2. AMU associated behaviours and practices sustainably improved in critical areas.
Outcome(s)	<ol style="list-style-type: none"> 1.1 Risk and benefits of AMR reflected in national budgets and in development. 1.2 Evidence base/representative data on AMR/AMU improved for policy-makers and sectors implementing AMU practices. 2.1 Use of antimicrobials optimised in critical sectors. 2.2 Improved understanding of AMR risks and response options by targeted groups.
Outputs and Key activities	<p>Output 1. Improved countries capacities for designing and implementing AMR related policy frameworks, investment plans and programmes</p> <ol style="list-style-type: none"> 1, Convene quarterly AMR platform meetings including core technical Working Group meetings. 2, Conduct a data mapping exercise to support the monitoring and evaluation framework and identify cost-effective (efficient) means to monitor and evaluate implementation of the NAP. 3, Monitor implementation of the AMR NAP in Ghana half-yearly.

4, Research economic costs and implications of AMR in plant health, terrestrial and aquatic animal health, environment, human-health etc. and technical analysis of investment outlook.
5, Public forum on Economic case for investments into AMR (defining gaps and investment opportunities in AMR).

Output 2. Improved countries capacities for mainstreaming and for costing AMR as well as changes in practices to minimize AMR

6, Conduct in-depth assessment of barriers, bottlenecks, and gaps to inform effective mainstreaming and implementation of AMR NAP activities in the relevant sectors.
7, "Finalise and publish AMR NAP mainstreaming guidelines for Ministries Departments and Agencies (MDAs).
Multi-sector MDA director's forum to provide technical support for AMR NAP mainstreaming and prioritisation by MDAs".

Output 4. Systems for generating, analysing and interpreting data on resistance and consumption/use patterns developed or strengthened

8, Technical Workshop Series on generation, analysis, interpretation and use of quality resistance and consumption data (AMU/AMC/AMR data quality)
9, Policy dialogue on AMR and AMU data
10, Assess current capacity of laboratories for conducting culture and sensitivity testing; and capacity for hospital-based surveillance. (In 2 Regions, cross-sector)
11, Conduct AMR prevalence studies
12, Support the ESBL integrated surveillance protocol in 1 regions of Ghana
13, Support the ESBL data input into the GLASS
14, Resource regional laboratories with capacity to perform culture and sensitivity testing based on comprehensive needs assessment
15, Establish the surveillance system of antimicrobial use in animals. Crops and environment sectors
16, Develop indicators for monitoring antimicrobial use and resistance across all affected sectors
17, Develop monitoring tools for antibiotic use in terrestrial animals and aquaculture [This is linked with NAP activity 8.1.1.1.2]
18, Monitor antimicrobial use in selected health facilities for human health
19, Institute monitoring mechanisms for the use of antimicrobials in terrestrial animals, fisheries and plant health
20, Facilitate collection and review of sales data on antimicrobials for animal use
21, Develop systems to yield AMC surveillance data in human sectors

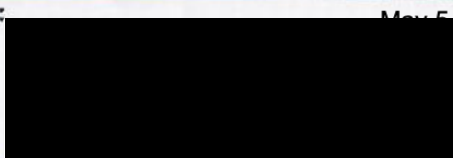
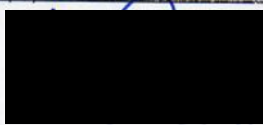
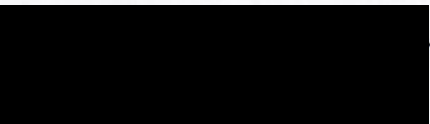
Output 5. Systems for biosecurity and IPC strengthened in targeted countries

22, Train the private practitioners in human health on MoH IPC document
23, Develop national biosecurity standards to enhance antimicrobial stewardship at farm level
24, Training manual development for biosecurity framework and SOPs

	<p>(and conduct training)</p> <p>25, Pilot the use of biosecurity standards to rank poultry, pig and fish farms in three ecological zones in Ghana</p> <p>26, Support the adoption of Integrated pest management (IPM) strategies using farmer field school approach</p> <p>27, Conduct antimicrobial use studies in animal sector to expand the initiated AMU behaviour change studies in other species</p> <p>Output 6: Systems for optimized use strengthened in critical sectors</p> <p>28, Adapt the WHO classification list of Antimicrobials for Ghana and ensure optimised prescribing and dispensing based on Laboratory results</p> <p>29, Develop training scheme and train veterinary personnel on responsible use of antibiotics in terrestrial animals and aquaculture</p> <p>Output 7. Improved countries capacities to design targeted awareness raising/behaviour change initiatives</p> <p>30, Develop Information, Education and Communication (IE & C) materials for targeted groups in a stratified public education campaign (informed by target audience analysis)</p> <p>31, "Educate the public in order to promote the responsible use of antimicrobials among the general population (leveraging the WAAW momentum); Public education and sensitisation on the dangers of sourcing antimicrobials from unauthorised sources (unregulated sources); including Queen mothers and Traditional rulers"</p> <p>32, Review the public education campaign for optimized impact</p>
<p>Link to National Action plan</p>	<p>Government's priority is to deliver on SDGs, assure UHC, food security and safety for its citizens in a safe and healthy environment necessary for improved productivity. This it plans to achieve through primary health care, equitable access to safe, effective and efficacious essential antimicrobials, health insurance scheme; implementing food security and biosecurity measures in the flagship program on planting and rearing for food and jobs; environmental sanitation; reducing morbidity and mortality as well as improving country's preparedness for health threats.</p> <p>MTPF outputs and outcomes aligns with the Ghana NAP which was developed with guidance from the same agenda items as indicated above on UHC, Food Security and Safety, the SDGs, the Health Sector Medium Term Strategy, Planting and Rearing for Food and Jobs, as well as the country's national development plans to contribute to achieving government's priorities.</p> <p>The aspiration of the MPTF is to ensure commitment to the principles of one health (communication, coordination and collaboration) in a holistic manner across human, animal and environmental health in curbing the threat of AMR. This aspiration is a backbone to Ghana's NAP on antimicrobial use and resistance; hence the strong inclusion of the tripartite sectors in all activities where possible.</p>

<p>Link to country's development priorities</p>	<p>Government of Ghana has shown commitment to AMR activities over the years. The development of the policy and NAP was country led before tripartite support. The President of the republic of Ghana officially launched the AMR Policy and NAP in 2018. He further directed the SDG secretariat to collaborate with the AMR team to implement activities. This was followed by the hosting of the second Global Call to Action on AMR by Ghana in 2018. Mainstreaming of NAP activities was developed with tripartite support for ministries and agencies to include in sector plans to attract government funding.</p> <p>Government has also established the AMR Secretariat and the Inter-Ministerial Committee on AMR with clear terms of reference to oversee activities on AMR. To ensure tracking and accountability, government has included some AMR activities in the 40-year national development plan for the nation and included AMR indicators into the country SDG plans. Plans are advanced to move some recommended AMR policy actions into legislation. Government's continuous interest in the level of implementation of the NAP is evidenced in the Presidents keen interest in AMR agenda.</p>
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We the responsible officers of the Tripartite organisations 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>Name: Ms Jocelyn Brown Hall FAO Representative in Ghana</p>	<p>Signature:  May 5 2021 Date:</p>
<p>Name: Dr Karim Tounkara OIE Representative</p>	<p>Signature:  Date: 05.05.21</p>
<p>Name: Dr Francis Kasolo WHO Representative</p>	<p>Signature:  Date: 4th May 2021</p>

(***See attached Tripartite Signed Cover Letter)

Joint Programme Description

1 Baseline and situation analysis

1.1 Problem statement

The AMR problem

The emergence and spread of AMR is recognized as one of the major threats to human establishments globally, affecting human health, animal health and food production as well as the environment.

WHO estimates that, in 2014, there were about 480 000 new cases of multidrug-resistant tuberculosis (MDR-TB), a form of tuberculosis that is resistant to the 2 most powerful anti-TB drugs, and also has longer course of treatment (which is less effective than those for non-resistant TB). Globally, only half of MDR-TB patients were successfully treated in 2014. Also, extensively drug-resistant tuberculosis (XDR-TB), a form of tuberculosis that is resistant to at least 4 of the core anti-TB drugs, has been identified in 105 countries. An estimated 9.7% of people with MDR-TB have XDR-TB (15). Due to AMR, infections persist, complicated by the increased the risk of spread, and can lead to medical complications with associated increased morbidity and mortality. Hospitalization and its associated financial and economic costs also increase, affecting productivity and general quality of life. Much more resources are spent to treat common infections caused by resistance microbes, escalating healthcare cost to both the patient and/or the payer (including government budgets and the budgets of health insurance schemes such as the Ghana National Health Insurance Scheme).

The above situation is similar to the agriculture and aquaculture sectors. As a result of AMR, medicines that were once effective treatments for disease in livestock, poultry, fishes, plants, etc. become less effective or even ineffective, leading to a reduced ability to successfully treat infections, increased mortality; more severe or prolonged illnesses; production losses in agriculture; and reduced livelihoods and food security.

The health consequences as well as the economic costs of AMR are respectively estimated at 10 million human fatalities a year and a 2 to 3.5 percent decrease in global Gross Domestic Product (GDP), amounting to US\$ 100 trillion by 2050 (16). The impact of AMR on agriculture and aquaculture has a direct effect on human health, food security, and food production etc. with associated huge losses to these critical productive sectors of the economies of countries including Ghana.

With above adverse impact of AMR in sight, established driving factors of AMR such as irresponsible use of antimicrobials (increasing natural selection of resistant microbes); coupled with poor infection prevention and control (IPC) measures; poor regulation of antimicrobial agents; bad farm practices; poor sanitation and environmental hygiene; the absence of robust surveillance systems; the lack of information as well as weak information dissemination systems; and a dwindling pipeline of novel antimicrobials further compound the problem of AMR.

AMR challenges infectious disease therapy and threatens gains made in health, food production and food security, as well as environmental safety; with severe impact especially in low-resource countries, in a situation where the full impact of AMR remains difficult to estimate.

The role of Tripartite action in supporting country action on addressing the AMR problem

With the evidence on the scale of the AMR problem becoming lucid, the global agenda-setting mechanisms have been triggered leading to various additive, complementary and incremental resolutions on AMR. Key amongst these are the World Health Assembly discussions and resolutions in 2005, 2007, 2014 and 2015 (17).

A critical resolution of the 67th World Health Assembly in May 2014 (WHA67.25), (18) welcomes the establishment of the WHO Global Task Force on Antimicrobial Resistance and the *tripartite collaboration between FAO, OIE and WHO*, and urges member states among other actions to develop or strengthen national plans and strategies and international collaboration for the containment of antimicrobial resistance.

Again at the 68th World Health Assembly in May 2015 (WHA 68.7) (19) among other issues, defined the scope and challenge of AMR and the five global strategic objectives which should form the fundamental pillars for country action plans on AMR. Thus, the following strategic objectives were defined:

- 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

The September 2016 United Nations General Assembly (UNGA) resolution on AMR stated the resolve of member states on the need to tackle AMR agreeing on 'One Health'-oriented action plans, including the Global Action Plan (GAP) adopted by WHO, FAO, OIE and partners. The One health approach to AMR interventions is in alignment with aspects of the Ghana Health Policy (GHP) (20), which is promotive of multi-sectoral collaboration. The GHP recognizes that public policies and resulting actions of different sectors impact on health and population well-being, and therefore seeks to ensure that all sector policies and actions support the achievement and maintenance of a healthy population.

Ghana among many other countries globally developed the National Policy on Antimicrobial Resistance (AMR) and Antimicrobial Use (AMU) in line with the global AMR strategic objectives with a strong emphasis on governance as well as monitoring and evaluation mechanisms (21). The 5-year Ghana National Action Plan (NAP) on AMR was also developed (to interpret the national AMR policy) with both documents; modelled on five thematic areas based on the principles of the GAP (22), and ensures the convergence of all efforts and interventions across all sectors to tackle AMR in the one health approach. So far Ghana's success story on the development of AMR policy documents is pivoted on a strong political will and the leveraging of donor support for specific activities (23).

A recent desk review of status of implementation of activities as outlined in the NAP revealed concerns regarding implementation gaps; delayed and pending action; as well as the lack of monitoring and evaluation (24). While the Ghana AMR NAP defines action on a total of about 144 activities to fulfil all the aspirations of the five strategic objectives. Analysis revealed implementation at 6% of activities completed, 34% of activities partially started or ongoing and a staggering 60% of activities not started as at the third (3rd) year of implementation. The low implementation rate is attributed mainly to funding constraints against the estimated 21 million USD investment to combat AMR in Ghana in the one health approach (22).

The current COVID-19 pandemic; though viral in origin has led to an anecdotal increased use of antimicrobials. There are critical concerns for infection prevention and control (in humans, animals and the immediate environment) in the fight against AMR as well as COVID-19. The implementation of the AMR NAP would contribute to the resilience of the health system in managing infections, a strength which could be leveraged during global pandemics like COVID-19. The need to develop guidelines, undertake joint public education and training on AMR-related issues including IPC and biosafety/biosecurity is important to meet the unmet need of a strengthened system in the face of a pandemic.

Underpinning the above implementation constraints for the Ghana AMR NAP are teething uncertainties around the following:

- Laboratory surveillance activities of strategic objective 2 due to the pause of implementation by the Fleming Fund country initiatives (with anticipated progression under Fleming Fund Grant 2).
- Challenges in mainstreaming NAP activities into the programmes of work (POW) of some implementing agencies
- Poorly resourced coordination of AMR NAP actions between sectors and implementing agencies.

The fundamental problem areas informing the interventions in this project include:

- 1. Weak surveillance systems for AMR and AMU, complicated by weak data infrastructure to support evidence-based decision-making on AMR**
- 2. Misuse of antimicrobial agents at the community level as well as among some professional groups**
- 3. Absence of investments into AMR and associated actions**
- 4. Poor infection prevention practices in farms, in hospitals, communities etc.**
- 5. Lack of AMR specific standards complicated by weak enforcement of existing standards**

Therefore, existing initiatives on AMR in Ghana include:

- AMS programs in 5 hospitals piloted through support from commonwealth partnership for AMS programmes (25),
- Pilot AMC surveillance in public hospitals in 2015 through support from WHO-with guidance from the WHO AMS toolkit,
- Routine data collection on AMC for animal health by the Veterinary Services Division of the MOFA,
- WHO supported Tricycle ESBL *Escherichia coli* project and,
- Farmer field schools supported by the FAO to encourage good animal farm practices while ensuring the responsible use of antimicrobials

In view of the above global direction, country policy priorities, gaps in deployment of AMR initiatives, as well as existing and ongoing interventions in AMR in Ghana, it is envisaged that the MPTF would provide a good opportunity to work with the MPTF tripartite as well as all affected sectors in Ghana (human, animal, plant and environment) to implement priority and pressing activities with catalytic effect on AMR NAP implementation while responding to the outcomes and impacts expected by the MPTF.

The outputs identified in the MPTF synchronizes with activities in the NAP of Ghana in one health and will contribute to the SDG and UHC in the long term. Thus, implementation of the AMR MPTF project is a critical contribution to the AMR fight in Ghana.

1.2 AMR MPTF Results Matrix

Please refer to Appendix 3, attached to this proposal

1.3 Stakeholder mapping and target groups

Stakeholder	Involvement in addressing AMR at the national level	Interest	Power	Engagement action
Ministries Departments and Agencies (MDAs) - Ministry of Health; Ministry of Food and Agriculture; Ministry of Fisheries and Aquaculture Development; Ministry of Environment, Science, Technology and Innovation; Food and Drugs Authority; Environmental Protection Agency; Ghana Health Service, Society of Private Medical and Dental Practitioners; Ghana Quasi Government Health Institutions; Christian Health Association of Ghana, and Teaching Hospitals; Veterinary Services Department; Agencies Pharmacy Council; National Health Insurance Authority; Council for Scientific and Industrial Research (CSIR) water,	<p>MDAs hold statutory implementation mandate on key aspects of AMR implementation.</p> <p>MDAs hold a critical link to the sustainability of the AMR MPTF outcomes beyond the project phase; through e.g. effective mainstreaming</p> <p>Programme beneficiaries</p>	High	High	Manage closely
Academia and Research Organisations - Kwame Nkrumah University of Science and Technology; University of Ghana; Noguchi Memorial Institute of Medical Research; Kumasi Centre for Collaborative Research in Tropical Medicine (KCCR)	Special competencies in research which are relevant for the AMR MPTF project	High	Low	Keep informed and engaged
CSOs and the Media - Civil Society Organisation (health, environment, animal, consumer protection, media);	Special competencies in advocacy and community mobilisation which are relevant for the AMR MPTF project	High	Low	Keep informed and engaged
AMR Country governance structures - AMR inter-ministerial platform; National AMR Platform; AMR Secretariats and Offices of Sector Focal persons	<p>Responsible for driving the AMR governance process; as well as coordinating the AMR platform and inter-ministerial processes</p> <p>Programme beneficiaries</p>	High	High	Manage closely
Private Sector - Pharmaceutical Society of Ghana; Community Practice Pharmacists Association; Associations of farmers, veterinarians, abattoirs, fish farmers, etc.	<p>Supply of antimicrobial agents for use in hospitals, farms, fisher sector and industry.</p> <p>Target for key interventions; including PPPs/investment packages</p>	Low ^δ	Low ^δ	Monitor

Stakeholder	Involvement in addressing AMR at the national level	Interest	Power	Engagement action
	Programme beneficiaries			
Tripartite partners - Tripartite agencies involved, including other UN organizations or partners, UNDP, UNICEF	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 Ghana AMR space for the MPTF project and partners. Programme funders	High	High	Manage closely

^δ the interest and power of private sector stakeholders as presented here is a simplification of the possible context. The actual interests or private sector could be complex and beyond the scope of this document.

2 Programme strategy

2.1 Overall strategy

The goal of “One Health” is to encourage the collaborative efforts of multiple disciplines – working locally, nationally, and globally – to achieve the best health for people, animals, and our environment. The “One Health” approach is important because, 6 out of every 10 infectious diseases in humans are spread from animals.

The interventions in this project would transform the approach to NAP implementation. There are a number of actions being implemented in various sectors with sub-optimal coordination, communication and collaboration. The extensive emphasis on the tripartite and one-health approach would create a platform for various implementing stakeholders to act in concert with common objectives. In order to achieve this, a significant set of activities in this proposal are designed in a cross-sector format to setup key actors within the confines of one health.

Activities captured are also activities that could be extended in implementation, to ensure that actions are scalable across sectors and within sectors. Among such activities is the assessment of laboratory capacity which would be done as an extensive work in Ghana, in order to define the capacity of laboratories in relation to culture and sensitivity testing to inform further laboratory upgrade programmes as well as potential investments in AMR.

The approach where agencies work in isolation (in silos) does not help the AMR containment agenda, due to the multi-sector complexities and complications of AMR. Actions in plant sector and the environment affect the animal sector which in turn has a link with human health and vice-versa; justifying the one health approach over the ‘silo’s’ approach.

The AMR MPTF would accelerate efforts at implementing the NAP; because the objectives of the AMR MPTF aligns with the NAP priorities. Within the Ghana MPTF project, this effect gives Ghana the opportunity to achieve the dual country NAP and the AMR MPTF objectives.

Again, the AMR MPTF within the first phase, contributes to funding approximately 1million USD which is about 4.7% of the total NAP budget and represents a further boost to national efforts. As various partners roll in

support the catalytic impact would be clear as depicted by the deliverables embedded within the project. This represents significant value addition to the Ghana and global fight against AMR.

The AMR MPTF addresses a significant set of core activities from the AMR NAP and defined sub-activities and or auxiliary activities for such and hence contributes directly and significantly to NAP implementation in Ghana.

Thus, through the MPTF the budgetary demand for investment into AMR from the government would be supported. The AMR MPTF implementation specifically includes activities that seek to strengthen the core implementing ministries to mainstream the NAP activities into routine programmes of work. This way the implementation of the NAP in Ghana would transition into the normal funding and standard arrangements with the various sectors. System integration would be achieved; government would support continuation and scale up of key results within normal funding arrangements. Also, key capital-intensive investments, as part of the AMR MPTF objects and the AMR NAP objectives are being tabled in consideration for public private partnerships under this project. This introduces sustainability and scale up of results.

Under the MPTF project existing efforts of the Fleming Fund work in Ghana would be developed further. In the area of surveillance, MPTF would leverage standard guidelines and protocols defined and used for the Fleming Fund surveillance implementation. This would ensure that MPTF does not create parallel systems but align with the collective country technical and governance direction on surveillance.

After this phase of implementation, a strong case would have been made for the continuation of MPTF project in the various areas identified. Actions in such areas as laboratory upgrade and deployment of surveillance systems; as well as effective M&E, collection and collation of antimicrobial consumption data, capacity for use of AMR data would be further advanced, whiles creating the space for deeper and closer work with the AMR MPTF.

2.2 Theory of Change

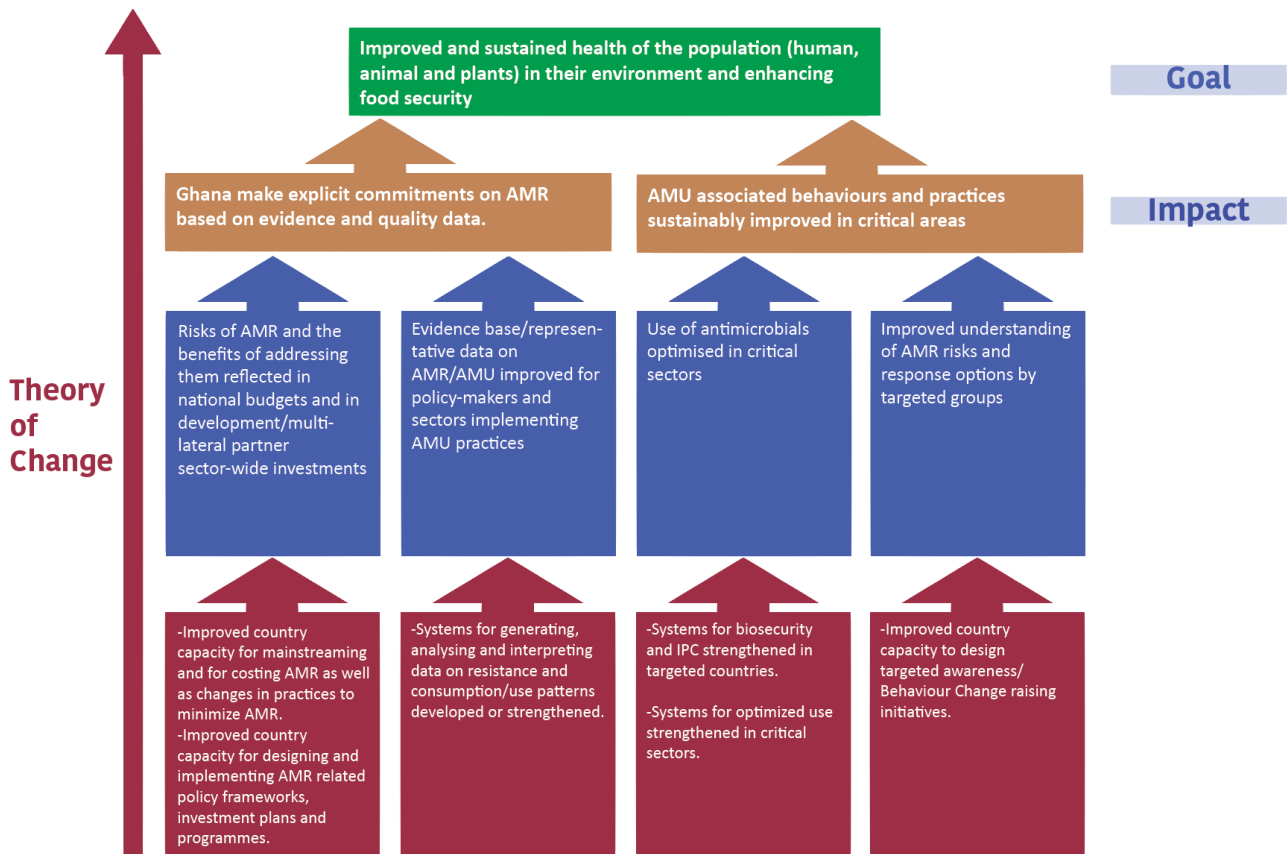


Fig1: Theory of Change for AMR MPTF project in Ghana

2.3 Expected results and Narrative

Within the Ghana AMR MPTF project, the desired impact is that Ghana demonstrably makes commitments to **technical, operational, financial** nature to AMR based on quality data and evidence; while addressing a key driver for AMR i.e. use/misuse/abuse of antimicrobial agents. This implies, addressing antimicrobial misuse as a root cause while responding to the complex expression of the AMR problem based on evidence informed decisions on **technical, operational, financial** commitments to combat AMR.

In order to achieve this, the MPTF would work to achieve the following outcomes:

- generate evidence on AMR/AMU for policy decision
- ensure that the risks of AMR and associated benefits due to risk containment are reflected in or informs development agenda and investments (through improved country capacities for AMR programme design and implementation as well as mainstreaming);

From the above, it is evident that the MPTF seeks to create the needed change through investments into those systems that generate data on AMR and AMU. Presenting this data to the key actors and decision makers to inform critical decisions in all sectors; and ensuring that AMR reflects in development agenda as expressed in the planned actions of MDAs.

The MPTF would also work to:

- improve understanding among targeted groups (e.g. those using antimicrobials) on the AMR risks (through improved capacity for designing targeted awareness and behaviour change initiatives)
- optimise the use of antimicrobials (through effective systems for biosecurity, infection prevention, training and monitoring of antimicrobial use)

From the above, it is evident that the MPTF seeks to create the needed change by reducing the demand for antimicrobials through infection prevention measures; ensuring rational use of antimicrobials; empowering targeted groups to appreciate the risks of AMR; building capacity for targeted behaviour change campaigns; monitoring and training.

It is the net effect of the above that is envisaged to impact positively on the AMR problems outlined above. This is the collective and shared desired change that is sought by all partners implementing this project as each partner deploys human resource, time and effort, financial investments, and technical expertise towards implementation of the Ghana AMR MPTF project.

2.4 Budget, sustainability and value for money

The Ghana AMR MPTF budget has been developed to ensure value for money.

- 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 Ghana AMR MPTF project **budget** is designed to ensure internal synergies between activities ensuring value for money. Budgets for public education campaigns can easily escalate. Thus, in this project the Public Education campaigns are merged, so that while the project funds the communication channels; 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 MDAs to be funded as part of GoG budget
- The activities to be implemented in the Ghana AMR MPTF are aligned with the AMR National Action plan. These activities build on other activities already implemented in Ghana 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 Ghana AMR NAP, as launched by the President of the Republic of Ghana, 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

MPTF supporting the National AMR Coordination Committee

The AMR MPTF project leverages the existence of the Ghana AMR platform as a technical space for implementation of activities. Thus, the project workplan incorporates and funds a number of AMR platform meetings as part of implementation action.

These engagements with the AMR 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 Ghana 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, plant, fish, and environmental sectors.

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

- **Ministries Departments and Agencies (MDAs)** - Ministry of Health; Ministry of Food and Agriculture; Ministry of Fisheries and Aquaculture Development; Ministry of Environment, Science, Technology and Innovation; Food and Drugs Authority; Environmental Protection Agency; Ghana Health Service, Society of Private Medical and Dental Practitioners; Ghana Quasi Government Health Institutions; Christian Health Association of Ghana, and Teaching Hospitals; Veterinary Services Department; Agencies Pharmacy Council; National Health Insurance Authority; Council for Scientific and Industrial Research (CSIR) water,
 - The above are MDAs 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 organisations; hence the need to engage and work closely with the key MDAs involved. (See activities table for the specific lead implementing entity for each activity)

- **Academia and Research Organisations** - Kwame Nkrumah University of Science and Technology; Medical Microbiology Department, University of Ghana; Noguchi Memorial Institute of Medical Research; Kumasi Centre for Collaborative Research in Tropical Medicine (KCCR)
 - The above Academic partners would contribute 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.

- **CSOs and the Media - Civil Society Organisation (health, environment, animal, consumer protection, media);** Coalitions of NGOs in Health, animal, environment etc. sectors.
 - The above CSO partners would contribute expertise to the MPTF project in the specific areas of community mobilisation for public education
 - The AMR MPTF seeks to change behaviour through public education campaigns, hence the need to continually engage with the CSO actors.

- **AMR Country governance structures** - AMR Inter-Ministerial Committee; National AMR Platform; AMR Secretariats and Offices of Sector Focal persons
 - The AMR secretariat and focal persons, would be key allies to implement this project. They would also facilitate access to critical data within MDAs such as monitoring and evaluation data to support project implementation.

- **Private Sector** - Pharmaceutical Society of Ghana; Community Practice Pharmacists Association; Health Seekers International Associations of farmers, veterinarians, abattoirs, fish experts, etc.
 - The private sector is a major player in the supply of antimicrobial agents for use in hospitals, farms, fisher sector and industry. 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 Ghana AMR space.

Pooling country, regional and global expertise in support of project implementation

The Ghana AMR MPTF is designed to draw on high quality expertise and subject technical inputs from within the tripartite as well as the pool of expertise within the Ghana AMR platform.

The project draws on experiences with the AMR platform and the Ghana AMR technical space, to explicitly determine, which kinds of technical assistance would be pooled from country, regional and global levels.

The approach therefore creates the scenarios where regional or global technical assistance is pooled to work closely with and support the AMR platform, key implementing stakeholders, and the project technical working group to produce specific deliverables.

Engagement of existing AMR donors to leverage synergies and avoid overlaps and double counting of results

The Ghana AMR policy and NAP, envisaged the role, interconnections, interests, influences and actions of multiple country level partners as well as development and donor partners in the AMR space and hence defined essential governance strategies as a critical part of the AMR policy framework. Thus, Ghana's AMR actions revolve around effective governance to ensure efficient use of resources and value-for-money.

The Ghana AMR policy and NAP set up governance structures to include, the AMR inter-ministerial committee; the AMR platform, the AMR secretariat and focal persons as well as the AMR technical task teams/technical working groups. While the point of technical engagement for donors and development partners is with the Ghana AMR platform, the point of strategic governance action is the AMR inter-ministerial committee. Also the point of coordination action is the AMR secretariat. Actions and investments in AMR with impact on national systems would go through the AMR platform to ensure governance.

Synergies are assured through the following:

- Potential partners to AMR Ghana would be routed through the AMR platform, secretariat and inter-ministerial platform. It is the role of these AMR governance structures to ensure alignment of action and investments to deliver optimal outcomes and value for money. This way duplications are avoided as it is in the interest of the state to ensure that investments address those aspects of the NAP which have not seen much implementation action.
- At platform meeting updates members present on all ongoing and upcoming AMR actions to the technical community; creating the opportunity to align actions and optimise resource use. The openness and level of visibility within the AMR platform ensures that all stakeholders are informed of ongoing work thus minimising potential duplications and overlaps; best identified at the time of project design to ensure a fluid synergistic design. Under the MPTF project this aspect of the AMR platform work, would be sustained.

- In the area of surveillance, where the Fleming Fund project has initiated work in selected sentinel sites, the AMR MPTF would build on existing successes. The AMR MPTF therefore, would use surveillance guidelines developed during the Fleming fund project period thus leveraging synergies between all sites implementing surveillance strategies irrespective of the projects which deployed the surveillance systems. These guidelines and operating procedures are also useful in other sections and would be leveraged.
- Technical and management expertise deployed to this project would be pooled from sources including the spectrum of individuals who have contributed or defined some of the systems under implementation. This would help ensure technical coherence with work already done or ongoing in Ghana.

Currently (at the time of this proposal) the partners in the AMR space in Ghana include:

- The Fleming Fund: working on setting up surveillance systems in Ghana with the objective of generating AMR data (prospectively) through a national AMR surveillance system.
- Mapping Antimicrobial Resistance Partnership (MAAP) Project: working on AMR surveillance retrospective data.
- WHO ESBL Tricycle: working on Surveillance for ESBL *E. Coli* in the environment, humans and animals.
- FIND-supported - Point of Care Diagnostics AMR Stewardship Programme Ghana (in collaboration with Dodowa Health Research Centre and being implemented in one region).
- Scottish West Africa Antimicrobial Partnership to fight antimicrobial resistance: working on stewardship in selected health facilities in one region of the country.
- Scaling up Pneumonia Response Interventions (SPRINT) Project: working on the use of Amoxicillin dispersible tablets and oxygen in pneumonia guidelines for children (piloted in one region of Ghana).
- Commonwealth: stewardship project: worked on stewardship in selected health facilities.

Initiatives exploring potential work with Ghana include:

- Pfizer and Wellcome trust surveillance (Surveillance Partnership to Improve Data for Action on Antimicrobial Resistance (SPIDAAR) project: exploring work on AMR surveillance in specific health facilities based on Pfizer Atlas surveillance tool.
- International Centre for Antimicrobial Resistance Solutions (ICARs) initiative: exploring work in the area of AMR stewardship and knowledge generation.
- Other partners including UNICEF and GFATM (Global Fund to Fight AIDS, Tuberculosis and Malaria) offer great potential for AMR in Ghana.

2.6 Programme implementation in the light of COVID-19

Ghana is systematically easing restrictions to movement and physical person-to-person gatherings which became necessary due to COVID-19. Limitations on the number of persons at any gathering has been moved from 100 people to 200 people by presidential directive. This directive makes it possible to hold group meetings within the limits of 200 people. By the design of the AMR MPTF project, all meetings have been kept within maximum of 100 participants.

All actions involving person-to-person meetings, would be carried out in a manner that applies optimal infection prevention protocols.

Where necessary, virtual meetings would be done to limit person-to-person contact, should Ghana experience a second wave of COVID-19 infections.

2.7 Communication, Advocacy and Lesson Learning

The Ghana AMR MPTF project covers critical areas for advocacy, communication and lessons learning, some of which are highlighted below.

- Engagement or high-level strategic influencing of senior management of MDAs to buy-in the generation of sustainable investment models for public private partnerships (PPPs) to support the nationwide laboratory upgrade programme as detailed in the NAP. The AMR NAP governance structure provides platforms where engagement of these entities could begin.
- The public education campaigns on AMR are opportunities for mass media communication.
- The platforms engaged through the AMR MPTF project for public education and mass communication, would also be leveraged for project management personnel to communicate the AMR MPTF deliverables and achievements in order to bring visibility to the AMR tripartite and associated inputs to national agenda.

This aspect of the NAP implementation under the MPTF is work documenting and required targeted communication in order to make a case for the role of such public private partnership initiatives in supporting the AMR NAP budgets of LMICs. The AMR MPTF actions which seek to establish a mainstreaming link between the NAP and the Programmes of Work of MDAs, required follow up advocacy to ensure the actions are internalised within the MDAs.

In order to share best practices and lessons learned, some activities within this proposal has publishable manuscripts +/- publication in peer reviewed journals as part of deliverable. Ghana also hopes to participate in a lessons-learned workshop to share best practices and challenges with other partners and other countries. Whiles this is being implemented, the stakeholder platform meetings would also be used to share knowledge and lessons learnt from the AMR MPTF project.

3 Programme implementation

3.1 Governance and implementation arrangements

- The Ghana AMR MPTF would be implemented in line with country priorities and under the governance mechanisms set up for AMR in Ghana. Implementation would therefore be guided by the AMR platform with governance oversight of the AMR Inter-Ministerial Committee.
- The AMR Secretariat and sector focal persons would provide assistance within their respective sectors especially in the areas of access to data etc. (e.g. monitoring end evaluation data, etc.) whiles assisting on other ongoing projects on AMR e.g. Fleming Fund Country Grant 2 (when started).
- 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 Ghana 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 Ghana. The AMR MPTF Overall Project Coordinator for Ghana would also work closely with the AMR secretariat, sector AMR focal persons and

focal persons of the tripartite to ensure seamless fund-flow and implementation as well as effective coordinated action.

- Implementing agencies 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 all stakeholders including the AMR platform and implementing MDAs are continually engaged.

3.2 Monitoring, reporting and evaluation

Reporting on the AMR MPTF will be results-oriented, and evidence based. Each Tripartite organisation will provide the Convening/Lead Agent with the following narrative reports prepared 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 (31 March) after the end of the calendar year, and must include the results matrix, updated risk log, and anticipated activities and results for the next 12-month funding period;
- Mid-term progress review report to be submitted halfway through the implementation of the Joint Programme¹ (depending on timing this may merge with the annual report);
- Final consolidated narrative report, after the completion of the joint Tripartite programme, to be provided no later than three (3) months after the operational closure of the activities of the Joint Tripartite programme.

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

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

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

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

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

¹ This will be the basis for release of funding for the second year of implementation

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

The joint Tripartite programme may be subjected to a Programme Review (methodology to be determined) or joint final independent evaluation (JFIE) 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

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

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

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

Funding by the AMR MPTF will be provided on annual basis, upon successful performance of the programme.

Procedures on financial transfers, extensions, financial and operational closure, and related administrative issues are stipulated in the Operational Guidance of the AMR MPTF.

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

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

Yes

No

Annexes

Annex 1 - Log Framework Template

AMR MPTF Log framework		Name of country: GHANA		
Impact: Impact 1. Countries (Ghana) make explicit commitments on AMR based on evidence and quality data				
Objectives	Indicators	Sources of verification		Key assumptions and risks
MPTF Outcome Objectives Outcome 1. Risks of AMR and the benefits of addressing them reflected in national budgets and in development/multi-lateral partner sector-wide investments	Output 1: Capacity improved for designing AMR related-investment plans Baseline: No such plans have been developed Target: A minimum of 2 areas covered by investment plans which would be developed to support NAP implementation	1. AMR platform reports 2. AMR economic evaluation report and 3. AMR Investment plan developed, informed by Economic evaluation report		A clear detailing of the risks and benefits of AMR, packaged as an investment plan would trigger deployment of resources into AMR from the wider business community High-level government would approve and open up critical capital-intensive sections of NAP implementation to a wider investment base.
	Country indicator 1a: As indicated below			
	Country indicator 1c: As indicated below			
MPTF Output Objectives	Indicator	Source of Verification	Key Activities	Key Assumptions and Risks
Output 1. Improved countries capacities for designing and implementing AMR related policy frameworks, investment plans and programmes (Improved capacity in Ghana to	Country indicator 1a: Fully functional One Health Multi-sectoral Coordination Group (MCG) established. (Ref. TrACSS 54.1D) (Ghana AMR multisectoral platform functional. Ghana AMR multisectoral platform engaged on Ghana	Verification for Output 1, Indicator 1a - AMR platform reports	Activities for Output 1: 4, Research economic costs and implications of AMR in plant health, terrestrial and aquatic animal health, environment, human-health etc. and technical analysis of investment outlook 5, Public forum on Economic case for	AMR platform continues to exist and be active as part of the governance structures for AMR NAP implementation. Key AMR champions support the concept of AMR investment plans to attract wider audience including the business community.

<p>develop AMR investment plans and implement AMR policy)</p>	<p>MPTF agenda on AMR investment plans)</p> <p>Baseline value:</p> <p>4 meetings of the AMR platform per year</p> <p>Target value:</p> <p>4 meetings of the AMR platform with focus on AMR investment plans)</p>	<p>- AMR platform reports with decisions on AMR investment plans</p>	<p>investments into AMR (defining gaps and investment opportunities in AMR)</p>	<p>Key AMR champions support the implementation of NAP under contribution from AMR MPTF.</p>
	<p>Country indicator 1c:</p> <p>Operational plan for implementing national action plan on AMR developed or updated with associated the budget consideration. (Operational plan with recommendations for accelerated implementation of Ghana AMR NAP and for further AMR action, developed)</p> <p>Baseline:</p> <p>AMR NAP exists to operationalise AMR policy</p> <p>Target:</p> <p>M & E data to inform recommendations on accelerated and further operationalisation of the NAP</p>	<p>Verification for Output 1, Indicator 1c</p> <p>- AMR M & E reports in Ghana (containing recommendations for accelerated and further actions on AMR NAP implementation)</p>	<p>1, Convene quarterly AMR platform meetings including core technical Working Group meetings</p> <p>2, Conduct a data mapping exercise to support the monitoring and evaluation framework and identify cost-effective (efficient) means to monitor and evaluate implementation of the NAP</p> <p>3, Monitor implementation of the AMR NAP in Ghana half-yearly</p>	
<p>Output 2.</p> <p>Improved countries capacities for mainstreaming and for costing AMR as well as changes in practices to minimize AMR (Improved capacity in Ghana to cost</p>	<p>Country indicator 2a:</p> <p>National Action Plan on AMR (NAP) with the estimation of the costs of the implementation of the NAP by year have been established or reviewed. (Ref. TrACSS 5D)</p>	<p>Verification for Output 2, Country indicator 2a and Country indicator 2b:</p> <p>-Updated AMR mainstreaming guidelines (detailing relevant AMR NAP annual NAP priority actions in each sector,</p>	<p>Activities for Output 2:</p> <p>7, "Finalise and publish AMR NAP mainstreaming</p>	<p>Senior managers of various MDAs would serve as champions in their institutions to drive further action on Draft AMR related POW for implementing agencies</p>

<p>and mainstream AMR into existing workstreams of AMR NAP implementing entities)</p>	<p>(Implementing entity costed Programme of Work [POW] on AMR informed by Ghana AMR costed NAP)</p> <p>Baseline: Costed AMR NAP exists to guide mainstreaming by implementing entities.</p> <p>Target: AMR NAP actions incorporated into plans or budgets or programmes to work of a minimum of 1 implementing entity.</p>	<p>associated annual budget estimates and priority areas)</p> <p>-Report on mainstreaming workshop for senior managers/technical officers of implementing entities with</p> <p>-Draft Implementing entity AMR POW for each selected entity</p>	<p>guidelines for Ministries Departments and Agencies (MDAs).</p> <p>Multi-sector MDA director's workshop to provide technical support for AMR NAP mainstreaming and prioritisation by MDAs"</p>	<p>(as captured and approved by senior management of implementing entities)</p> <p>Ongoing momentum on AMR inter-ministerial platform (funded under other AMR interventions) would serve as an opportunity to engage senior management of implementing entities to catalyse the approval of AMR NAP mainstreamed actions onto POWs.</p>
	<p>Country indicator 2b: Assessment of investment needs, existing resource finance and funding gaps for implementing National Action Plan conducted with the involvement of all relevant sectors. (Ref. TrACSS 5E and GAP M&E Framework)</p> <p>(investment needs, existing resources, finance and funding gaps as well as interplay of actors/stakeholders in all relevant sectors assessed)</p> <p>Baseline: Costed AMR NAP exists to guide mainstreaming by implementing entities. Mainstreaming risks (due to finding gaps etc.) not assessed</p> <p>Target:</p>	<p>-Report on in-depth assessment of AMR policy and NAP implementation focusing on stakeholders, mainstreaming, financing etc.</p>	<p>6, Conduct in-depth assessment of barriers, bottlenecks, and gaps to inform effective mainstreaming and implementation of AMR NAP activities in the relevant sectors</p>	

	Factors affecting AMR NAP mainstreaming identified			
Objectives	Indicators	Sources of verification		Key assumptions and risks
Outcome 3. Evidence base/representative data on AMR/AMU improved for policy-makers and sectors implementing AMU practices	Output 4. Systems for generating, analysing and interpreting data on resistance and consumption/use patterns developed or strengthened (Mechanism for Baseline: Investments into surveillance is yet to yield data for GLASS; as well as policy dialogue Target: Data for GLASS; which is analysed to inform policy dialogue on AMR	<ul style="list-style-type: none"> Surveillance data reports Ghana account on GLASS 		Laboratory inputs required in order to resource the selected project laboratories to conduct culture and sensitivity testing does not include procurement of capital-intensive equipment, which is outside the scope of the AMR MPTF project. Sites selected require non-capital-intensive inputs such as support for reagents etc. to enable culture and sensitivity testing.
	Indicator 4a; As detailed below Country indicator 4b: As detailed below Country indicator 4c: As detailed below			
MPTF Output Objectives	Indicator	Source of Verification	Key Activities	Key Assumptions and Risks
Output 4. Systems for generating, analysing and interpreting data on resistance and consumption/use patterns developed or strengthened	Country indicator 4b: Percentage of targeted laboratories with capacity to perform antimicrobial susceptibility testing and bacterial isolation and identification according to international standards.	Verification for Output 4, Country indicator 4b and Country indicator 4c: -Report on Laboratory capacity assessment of the selected AMR MPTF laboratories.	Activities for Output 4: 10, Assess current capacity of laboratories for conducting culture and sensitivity testing; and capacity for hospital-based surveillance. (In 2 Regions, cross-sector) 14, Resource regional laboratories with capacity to perform	Laboratory inputs required in order to resource the selected project laboratories to conduct culture and sensitivity testing does not include procurement of capital-intensive equipment, which is outside the scope of the AMR MPTF project.

	<p>Baseline: None (0%), in the context of the AMR MPTF project</p> <p>Target: All (100%) of the targetted centres, within the context of the AMR MPTF project, are able to perform culture and sentivity testing.</p> <p>Country Indicator 4c: National surveillance system for AMR supported in human health, animal health, plant health, food and environment; (Implementation of National surveillance protocols for AMR supported in selected AMR MPTF project sites) National system for monitoring AMC/AMU supported in human health, animal health, plant health and food</p>	<p>-Report on resourcing of the selected AMR MPTF laboratories. -Evidence on provision of laboratory inputs for culture and sensitivity testing in selected AMR MPTF project sites.</p> <p>-Report Series on Technical recommendations and training on AMR data generation, analysis and interpretation as well as data quality and governance.</p> <p>-Surveillance data reports (from AMR MPTF project sites)</p> <p>-Data Report on systems for AMC surveillance data developed/mechanisms for AMC surveillance data established.</p>	<p>culture and sensitivity testing based on comprehensive needs assessment</p> <p>8, Technical Workshop Series on generation, analysis, interpretation and use of quality resistance and consumption data (AMU/AMC/AMR data quality)</p> <p>11, Conduct AMR prevalence studies</p> <p>12, Support the ESBL integrated surveillance protocol in 1 region of Ghana</p> <p>13, Support the ESBL data input into the GLASS</p> <p>15, Establish the surveillance system of antimicrobial use in animals. Crops and environment sectors</p> <p>16, Develop indicators for monitoring antimicrobial use and resistance across all affected sectors</p> <p>17, Develop monitoring tools for antibiotic use in terrestrial animals and aquaculture [This is linked with NAP activity 8.1.1.1.2]</p> <p>18, Monitor antimicrobial use in selected health</p>	<p>Sites selected require non-capital-intensive inputs such as support for reagents etc. to enable culture and sensitivity testing. (as above)</p>
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			<p>facilities for human health</p> <p>19, Institute monitoring mechanisms for the use of antimicrobials in terrestrial animals, fisheries and plant health</p> <p>20, Facilitate collection and review of sales data on antimicrobials for animal use</p> <p>21, Develop systems to yield AMC surveillance data in human sector</p> <p>27, Conduct antimicrobial use studies in animal sector to expand the initiated AMU behaviour change studies in other species</p> <p>9. Policy dialogue on AMR and AMU data</p>	
		- Amr Policy dialogue report (indicating evidence of surveillance data sharing, emergent policy issues, and policy outlook for AMR in Ghana)		

AMR MPTF Log framework		Name of country: GHANA		
Impact:				
Impact 2. AMU associated behaviours and practices sustainably improved in critical areas				
Objectives	Indicators	Sources of verification	Key assumptions and risks	

MPTF Outcome Objectives Outcome 4. Use of antimicrobials optimized in critical sectors	Output 5. Systems for biosecurity and IPC strengthened in targeted countries Baseline: Biosecurity standards and guidelines yet to be developed Target: Biosecurity guidelines develop and used to train practitioners.	1. Ghana Biosecurity Standards and Guidelines for animal sector 2. Report on Pest control programme report 3. Training report of health professionals on IPC 4. Reports of assessment of antimicrobial use in target sectors	Development of guidelines and their use in training, lead to adherence to recommended practices. Development of guidelines and their use in training has a potential to improve antibiotic use. Development of guidelines and their use in training has a potential to improve antibiotic use to the same extent in all sectors. Optimised use, in the context of the AMR MPTF project, is use as determined by adherence to guidelines and protocols.	
	Output 6: Systems for optimized use strengthened in critical sectors Baseline: Current use not informed by guidelines in some targeted sectors. Unfavourable levels of non-adherence to guidelines in other sectors. Target: Positive trend in adherence to antibiotic use based on adherence to guidelines in affected sectors			
MPTF Output Objectives	Indicator	Source of Verification	Key Activities	Key Assumptions and Risks
Output 5. Systems for biosecurity and IPC strengthened in targeted countries	Indicator 5a: National plans developed or reviewed to ensure good production practices (Ref TrACSS 8.2)	Verification for Output 5, indicators 5a, 5b, 5c, 5d: -National Biosecurity and IPC standards and Technical report	Activities for Output 5: 23, Develop national biosecurity and IPC	As Above

	<p>(Ghana National Biosecurity Guidelines developed to ensure good production practices, with associated national plan for implementation)</p> <p>Baseline:</p> <p>No clear guidance on biosecurity standards for good production practices</p> <p>Target:</p> <p>Biosecurity standards for developed</p>	<p>developed with recommendations for good production practices</p>	<p>standards to enhance antimicrobial stewardship at farm level</p>	
	<p>Indicator 5b:</p> <p>Implementation and/or scale up minimum requirements for infection prevention for food production, in accordance with international standards (GAP M&E Framework 3.d).</p> <p>(Biosecurity standards and guidelines piloted in Ghana)</p> <p>Baseline:</p> <p>No clear guidance on biosecurity standards for good production practices</p> <p>Target:</p> <p>Biosecurity standards and guidelines piloted</p>	<p>-Report on pilot implementation of Biosecurity standards and IPC guidelines at selected project sites</p> <p>IPC/IPM technical reports</p>	<p>25, Pilot the use of biosecurity standards including IPC to rank poultry, pig and fish farms in three ecological zones in Ghana</p> <p>26, Support the adoption of Integrated pest management (IPM) strategies using farmer field school approach</p>	

	<p>Country indicator 5c:</p> <p>National IPC programme supported in line with IPC core components (TrACSS 8.1 D)</p> <p>Baseline: Some IPC interventions exist</p> <p>Target: AMR MPTF demonstrable contribution to IPC ie. IPC training conducted in support of national IPC programmes</p>	<p>-IPC training reports</p>	<p>22, Train the private practitioners in human health on MoH IPC document</p>	
	<p>Indicator 5d: Stakeholder (e.g. veterinarians, farmers, health workers) training for the scaled-up implementation of national IPC programme/interventions.</p> <p>Baseline: Some IPC interventions exist</p> <p>Target: AMR MPTF demonstrable contribution to IPC ie. IPC training conducted in support of national IPC programmes</p>	<p>-Biosecurity and IPC training manual</p> <p>-IPC training reports</p>	<p>24, Training manual development for biosecurity framework and SOPs (and conduct training)</p>	

<p>Output 6: Systems for optimized use strengthened in critical sectors</p>	<p>Country indicator 6b: Guidelines for responsible and prudent use of antimicrobials based on international standards are developed or revised. (Ghana Essential Medicines List [EML] and Standard Treatment Guidelines [STG] categorisation for antibiotics is based on WHO international AWARE classification to guide practice)</p> <p>Baseline: Lack of guidelines on the use of antimicrobials in animal sector. Guidelines exist but not aligned with WHO classification of antibiotics in human sectors.</p> <p>Target: Antibiotic use guidelines developed and used to train practitioners in animal sector. Listing of antibiotics in EML and STG aligned with WHO classification, in human sector.</p>	<p>Verification for Output 6, indicators 6b</p> <p>-Updated EML/STG for Ghana based on WHO AWARE classification</p> <p>- Training reports on practitioners in animal and human sectors</p>	<p>Activities for Output 6:</p> <p>28, Adapt the WHO classification list of Antimicrobials for Ghana and ensure optimised prescribing and dispensing based on Laboratory results</p> <p>29, Develop training scheme and train veterinary personnel on responsible use of antibiotics in terrestrial animals and aquaculture</p>	<p>Development of guidelines and their use in training, lead to adherence to recommended practices which would drive optimal use of antibiotics.</p> <p>Development of guidelines and their use in training has a potential to strengthen optimised antibiotic use.</p> <p>Development of guidelines and their use in training has a potential to strengthen optimised antibiotic use to similar extents in all sectors.</p> <p>Guidelines serve as the basis for defining and driving optimisation of antibiotic use in all sectors.</p>
<p>Objectives</p>	<p>Indicators</p>	<p>Sources of verification</p>		<p>Key assumptions and risks</p>

<p>MPTF Outcome Objectives</p> <p>Outcome 5. Improved understanding of AMR risks and response options by targeted groups</p>	<p>Output 7. Improved countries capacities to design targeted awareness/Behaviour Change raising initiatives</p> <p>Baseline: Ghana has conducted previous public education campaigns on AMR</p> <p>Target: Previous country experience upgraded and leveraged through AMR MPTF project to design multi-sector nationwide AMR public campaign using existing initiatives like WAAW</p>	<ol style="list-style-type: none"> 1. Technical reports on development of IEC materials for public education and IEC materials developed. 2. Technical reports on development of public education campaign leveraging the platform created by the World Antibiotic Awareness Week (WAAW) campaign/momentum in Ghana 		
Objectives	Indicators	Sources of verification	Key activities	Key assumptions and risks
<p>Output 7. Improved countries capacities to design targeted awareness/Behaviour Change raising initiatives</p>	<p>Indicator 7a: Delivery of nationwide AMR campaign targeting priority stakeholder groups based on stakeholder analysis and targeted messaging within sectors (TrACSS 6.1 D) (Ghana AMR MPTF Nationwide AMR campaign delivered, leveraging existing platforms)</p> <p>Baseline: Ghana has conducted public education campaigns on AMR</p> <p>Target: Previous experience and AMR MPTF opportunity leveraged to design multi-sector AMR campaign</p>	<p>Verification for Output 7, indicators 7a, 7b</p> <p>-Technical reports on development of public education campaign leveraging WAAW</p> <p>-IEC materials for public education on AMR</p>	<p>Activities for Output 7:</p> <p>30, Develop Information, Education and Communication (IE & C) materials for targeted groups in a stratified public education campaign (informed by target audience analysis)</p>	<p>WAAW platform gains momentum in the course of the project implementation timeline (a very likely scenario)</p>

	<p>leveraging existing platforms like WAAW</p>			
	<p>Indicator 7b: Number and list of communications strategies developed, or implemented to support improved capability for communication and behaviour change initiatives on AMR. (TrACSS 6.1 E)</p> <p>(National Communication strategy on AMR developed, informs the Nationwide AMR public campaign – implementation through WAAW AMR campaign)</p> <p>Baseline:</p> <p>AMR NAP recommends general communication strategies for AMR public education;</p> <p>Target:</p> <p>List of well detailed strategies expanding the provisions of the AMR NAP into ready to implement Communication strategies (implemented)</p>	<p>-Communication strategy technical document on AMR</p> <p>- Report on Public Education Campaign report; and Media Report</p>	<p>31, "Educate the public in order to promote the responsible use of antimicrobials among the general population (leveraging the WAAW momentum); Public education and sensitisation on the dangers of sourcing antimicrobials from unauthorised sources (unregulated sources); including Queen mothers and Traditional rulers"</p> <p>32, Review the public education campaign for optimized impact</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		
Risk to effective implementation due to COVID-19 related restrictions to movement and person to person contact (affecting meetings and field work)	Contextual	Slow pace of implementation; Re-scheduling of activities to enable activities which can be implemented remotely to be carried out.	Moderate	Moderately likely	In the worse scenario, digital meetings would be prioritized. Emphasis would be given to activities that can be done remotely or in isolation; whiles waiting easing of restrictions. The project budget has been designed to embed the ability to hold frequent digital meetings of the relevant size.	Project Manager
Risk to smooth implementation due to political changes	Institutional	Reduced pace of implementation due to changes in key high-level government roles.	Moderate	Uncertain	Should key officials in key Ministries be changed due to change of government (if it should happen), the new officials would be briefed immediately about the AMR MPTF project. This would ensure smooth continuation of work.	Project Manager/ AMR secretariat/AMR focal persons and AMR platform Chair

Risk due to administrative 'bottle necks'	Institutional	This would delay the outputs of critical actions on the critical path of the project	Moderate	likely	In order to minimise the impact of administrative issues and delays; key actions that are on the project critical path are all front loaded as presented in the project workplan. This would enable enough time for these critical actions to deliver outputs which are the inputs of the multiple other activities.	Project Manager/Project Technical Working Group
Risk to implementation due to Slow fund cycle	Programmatic	This would slow down the pace of project implementation	Low	Unlikely	When there is slow processing of funds due to conditions beyond the control of the country implementing team; the team would engage strategically with partners to a smooth resolution of project parameters such as timelines to enable fluid implementation. In addition, the project would be accelerated through multiple parallel implementation strategies to make up for lost time.	Project Manager/Project Technical Working Group

Annex 3 - Outline of Budget

Categories	FAO	OIE	WHO	Total
1. Staff and other personnel costs ²	51,989	30,992	108,000	190,981
2. Supplies, Commodities, Materials ³	35,546	13,021	-	48,567
3. Equipment, Vehicles and Furniture including Depreciation ⁴	-	-	-	-
4. Contractual Services ⁵	42,795	72,232	55,591	170,618
5. Travel ⁶	62,321	52,360	54,586	169,267
6. Transfers and Grants Counterparts ⁷	-	44,223	42,257	86,480
7. General Operating and Other Direct Costs ⁸	91,355	70,218	107,093	268,666
Total Direct Costs	284,005	283,046	367,528	934,579
8. Indirect support costs (Max. 7% of overall budget) ⁹	19,880	19,813	25,727	65,421
TOTAL Please indicate which organisation will receive pre-financing facility	303,886	302,859	393,255 Pre-financing by WHO	1,000,000

² Staff and other personnel costs: Includes all related staff and temporary staff costs including base salary, post adjustment and all staff entitlements. This includes the costs of a full-time project coordinator, based either in one of the organisations or the National coordination committee.

³ Supplies, Commodities, Materials: Includes all direct and indirect costs (e.g. freight, transport, delivery, distribution) associated with procurement of supplies, commodities and materials. Office supplies should be reported as "General Operating".

⁴ Equipment, Vehicles and Furniture including Depreciation: The procurement of durable equipment is not eligible for the AMR MPTF and this budget line should therefore not be used.

⁵ Contractual Services: Services contracted by an organization which follow the normal procurement processes. It used for procurement of services requiring provision of intellectual or specialization services not foreseen under works and construction contracts such as, but not limited to, maintenance, licensing, studies, technical, training, advisory services. These are ruled by FAO policy MS 502 or MS 507 ruling LoA.

⁶ Travel: Includes staff and non-staff travel paid for by the organization directly related to a project.

⁷ Transfers and Grants to Counterparts: Includes transfers to national counterparts and any other transfers given to an implementing partner (e.g. NGO) which is not similar to a commercial service contract as per above. Please reference FAO policy MS 502.

⁸ General Operating and Other Direct Costs: Includes all general operating costs for running an office. Examples include telecommunication, rents, finance charges and other costs which cannot be mapped to other expense categories. In addition, desk work from Headquarters (including from the project lead technical officer) should also be factored in these categories.

⁹ Indirect Support Costs: (No definition provided).

Annex 4 - National Work Plan Template

Name of Country

GHANA

Start Date **April 2021**

Projected End Date **April 2023**

				YEAR 1												YEAR 2											
				MONTHS																							
MPTF Activity Code	NAP Activity Title	Lead Tripartite Org	Implementing Partner	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Output 1. Improved countries capacities for designing and implementing AMR related policy frameworks, investment plans and programmes																											
1	Convene quarterly AMR platform meetings including core technical Working Group meetings	WHO cross-cutting	MOH	X			X					X			X			X			X			X			X
2	Conduct a data mapping exercise to support the monitoring and evaluation framework and identify cost-effective (efficient) means to monitor and evaluate implementation of the NAP	OIE cross-cutting	MOH		X	X	X	X																			
3	Monitor implementation of the AMR NAP in Ghana half-yearly	OIE cross-cutting	MOH	X					X							X					X						
4	Research economic costs and implications of AMR in plant health, terrestrial and aquatic animals health, environment, human-health etc. and technical analysis of investment outlook	FAO cross-cutting	MOH						X	X	X																

MPTF Activity Code	NAP Activity Title	Lead Tripartite Org	Implementing Partner	YEAR 1												YEAR 2											
				MONTHS																							
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
8	Technical Workshop Series on generation, analysis, interpretation and use of quality resistance and consumption data (AMU/AMC/AMR data quality)	OIE cross-cutting	AMR Sec	X	X																						
9	Policy dialogue on AMR and AMU data	OIE cross-cutting	AMR Sec															X									
10	Assess current capacity of laboratories for conducting culture and sensitivity testing; and capacity for hospital-based surveillance. (In 2 Regions, cross-sector)	WHO cross-cutting	Academia		X	X	X																				
11	Conduct AMR prevalence studies	WHO	Academia										X	X	X												
12	Support the ESBL integrated surveillance protocol in 1 region of Ghana	WHO cross-cutting	MESTI						X	X	X	X															
13	Support the ESBL data input into the GLASS	WHO cross-cutting	MESTI						X	X	X	X															
14	Resource regional laboratories with capacity to perform culture and sensitivity testing based on comprehensive needs assessment	FAO	Academia							X	X	X	X	X	X												

				YEAR 1												YEAR 2																	
				MONTHS																													
MPTF Activity Code	NAP Activity Title	Lead Tripartite Org	Implementing Partner	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
Output 6: Systems for optimized use strengthened in critical sectors																																	
28	Adapt the WHO classification list of Antimicrobials for Ghana and ensure optimised prescribing and dispensing based on Laboratory results	WHO	MOH				X	X	X	X	X	X	X	X	X	X	X	X	X														
29	Develop training scheme and train veterinary personnel on responsible use of antibiotics in terrestrial animals and aquaculture	OIE	VSD														X	X															
Output 7: Improved countries capacities to design targeted awareness/Behaviour Change raising initiatives																																	
30	Develop Information, Education and Communication (IE & C) materials for targeted groups in a stratified public education campaign (informed by target audience analysis)	OIE cross-cutting	AMR Sec								X	X	X																				

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 2.2 – 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 organisations*

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