



**NYERI COUNTY
ANTIMICROBIAL STEWARDSHIP
INTERAGENCY COMMITTEE
(CASIC)
WORK PLAN**

2020-2022

October 2020

A decorative graphic at the bottom of the page consisting of several overlapping, wavy lines in black, red, white, and green, set against a light blue circular background.

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ABBREVIATIONS AND ACRONYMS

ABHR	Alcohol Based Hand Rub
AHSP	Animal Health Service Provider
AMC	Antimicrobial Consumption
AMR	Antimicrobial Resistance
AMS	Antimicrobial Stewardship
AMU	Antimicrobial Use
ASK	Agricultural Society of Kenya
AST	Antimicrobial Sensitivity Test
ATC	Agricultural Training College
AWaRe	Access, Watch and Reserve Antibiotics
AWP	Annual Work Plan
BQ	Black Quarter
CAP	County Action Plan
CASIC	County Antimicrobial Stewardship Interagency Committee
CDC	Centers for Disease Control and Prevention
CDH	County Director for Health
CECM	County Executive Committee Member for Health
CHMT	County Health Management Team
CIMES	County Integrated M&E System
CIPC	County Infection Prevention and Control Committee
CME	Continuous Medical Education
CMLC	County Medical Laboratory Coordinator
E. coli	Escherichia coli
FAO	Food and Agriculture Organization of the United Nations
FMD	Food and Mouth Disease
FY	Financial Year
GHSA	Global Health Security Agenda
HH	Hand Hygiene
IDDS	Infectious Disease Detection and Surveillance
IEC	Information, Education and Communication Material
ILRI	International Livestock Research Institute
IPC	Infection Prevention and Control
KALRO	Kenya Agriculture & Livestock Research Organization
KEMRI	Kenya Medical Research Institute
KEPHIS	Kenya Plant Health Inspectorate Service
KES	Kenya Shillings
KVB	Kenya Veterinary Board
LPO	Local Purchase Order
LSD	Lumpy Skin Disease
M&E	Monitoring and Evaluation
MOH	Ministry of Health

MoU	Memorandum of Understanding
MOV	Means of Verification
MTaPS	Medicines, Technologies and Pharmaceutical Services
MTC	Medicines and Therapeutics Committee
NAP	National Action Plan
NASIC	National Antimicrobial Stewardship Interagency Committee
NCRH	Nyeri County Referral Hospital
NIMES	National Integrated M&E System
NMRL	National Microbiology Reference Laboratory
NPHL	National Public Health Laboratory
PCPB	Pest Control Products Board
PPS	Point Prevalence Survey
RHF _s	Rural Health Facilities
RVIL	Regional Veterinary Investigation Laboratory
SG POX	Sheep & Goat Pox
SOP	Standard Operation Procedures
SSI	Surgical Site Infection
ToR	Terms of Reference
ToT	Training of Trainers
TWG	Technical Working Group
USAID	United States Agency for International Development
USAID	United States Agency for International Development
WAAW	World Antimicrobial Awareness Week
WHO	World Health Organization

FOREWORD

Antimicrobials are valuable therapeutics used in the treatment of infections in humans, terrestrial and aquatic animals, and plant production practices. The efficacy of these drug agents is exceedingly compromised by the emergence and spread of Antimicrobial Resistance (AMR). With AMR, the disease-causing organisms respond poorly or not at all to medicines that they were initially responding to. This occurs naturally and slowly but is accelerated by overuse and misuse of antimicrobials. AMR is one of the greatest threats that we face as a global community. Currently, at least 700,000 people die each year due to drug-resistant diseases, including 230,000 people from multidrug-resistant Tuberculosis alone. By 2050, AMR related complications will account for approximately ten (10) million human deaths and about \$100 trillion losses in the global gross domestic product if containment measures are not urgently addressed.

Misuse and overuse of antimicrobials is driven by several factors including: high burden of endemic diseases in humans and livestock due to poor infection prevention control and low vaccination coverage; ease of over-the-counter access to antimicrobials due to poor enforcement of regulations; poor hygiene practices along the food value chains; weak healthcare systems leading to lack of access to quality services; poor animal husbandry practices and inadequate herd health programs, among others. These issues highlight the complexity of the health and food systems as well as the governance structures in which containment of AMR must be structured. Therefore, a One Health approach that calls for involvement of multisector and multidisciplinary partners is critical.

In 2018, the Kenya government in response to the global call to join in the fight against AMR launched the country's Policy and National Action Plan (NAP) for prevention and containment of AMR. The NAP is a five-year implementation framework for the AMR policy. It is on this backdrop that Nyeri County established the County Antimicrobial Stewardship Interagency Committee (CASIC) which I was glad to launch on 18th March 2019. The Nyeri CASIC is comprised of multiple stakeholders in the sectors of human health, animal health, crops health, and environment. These come from the Government and private sector players among others. This work plan is intended to guide resource mobilization, budget allocation and implementation of the AMR NAP in Nyeri County. The activities and indicators are aligned with those of the AMR NAP for ease of coordination with the National Antimicrobial Stewardship Interagency Committee (NASIC). I call upon all stakeholders and Nyeri County partners in the prevention and containment of AMR to align their activities with this work plan to enhance strategic coordination in implementation of the NAP.

H.E Mutahi Kahiga
Governor, Nyeri County

PREFACE

Antimicrobial resistance (AMR) refers to the inability of a microorganism to be killed or inactivated by an antimicrobial drug agent to which it was previously sensitive. Bacteria, viruses, fungi, protozoa and parasites that become resistant can withstand the effects of antimicrobials (e.g. antibiotics, antivirals, antimalarials, antifungals, antiparasitics). This makes standard treatments ineffective and the community vulnerable as drug resistant infections can spread.

The Departments of Health Services; Agriculture, Livestock & Fisheries; and Public Service, Environment and Sanitation are committed to undertake steward activities aimed at prevention and containment of AMR in Nyeri County. This will be achieved through implementation of the interventions outlined in the Nyeri CASIC Integrated Work Plan 2020 – 2022 which are aligned to the strategic objectives of the National Action Plan (NAP) for prevention and containment of AMR. The strategic objectives in the NAP are: to improve awareness and understanding of antimicrobial resistance; to strengthen knowledge through surveillance and monitoring; to reduce the incidence of infection; to optimize the use of antimicrobial agents; and to ensure sustainable investment in countering antimicrobial resistance.

This Work Plan has been jointly developed by the three lead Departments guided by the recommendations of the situation analyses on AMR conducted both at the national and county levels. Being the first CASIC Work Plan for Nyeri County, it focuses on establishing and strengthening systems to understand and contain the emergence and spread of AMR. Successful implementation of this strategy will require adequate funding, commitment by the County leadership, and effective collaboration among different sectors and partners.

CECM
Department of Health
Services

CECM
Department of Agriculture,
Livestock, Fisheries

CECM
County Public Service
Management and
Environment

ACKNOWLEDGEMENT

Development of the Nyeri CASIC Integrated Work Plan 2020/21–2021/22 was realized through a consultative process that brought together a multisectoral and multidisciplinary team of experts from health, agriculture and environment. Funding for the work planning workshop was provided by the Food and Agriculture Organization of the United Nations (FAO) through the United States Agency for International Development (USAID) Global Health Security Agenda (GHSA) program.

We give our special thanks to the drafting team comprising of officers and partners representing the Departments of Health Services, Agriculture (Animal health, crops, aquaculture) and Environment for their input and effort in developing this Work Plan.

We appreciate the support and guidance accorded to the drafting team by NASIC, who helped in aligning the Nyeri CASIC work plan to the objectives and aspirations of the National Action Plan (NAP) on prevention and containment of AMR in Kenya. We acknowledge the technical contribution of the FAO and that of the USAID funded projects through the Medicines, Technologies and Pharmaceutical Services (MTaPS) program and the Infectious Disease Detection and Surveillance (IDDS) program for guiding the process of developing this work plan.

Our sincere appreciation goes to the leadership of Nyeri County Government led by H. E. Mutahi Kahiga the Governor together with the County Executive Committee Members for the Departments responsible for Health services, Agriculture and Environment for their invaluable contribution, support and guidance in developing this work plan. We look forward to continued coordination and collaboration of all the stakeholders for successful implementation of this work plan.

CHAPTER I - INTRODUCTION

1.1. The Problem of Antimicrobial Resistance

Antibiotics have been useful in fighting infectious diseases for decades. These medicines have played a critical role in saving lives and have been used in agriculture mainly in animal production for both therapeutic and non-therapeutic purposes. Unfortunately, antimicrobial resistance (AMR) among bacteria of clinical and veterinary importance has reached levels that may reverse the gains made so far in management and control of infections.

Currently, at least 700,000 people die each year due to drug-resistant diseases, including 230,000 people from multidrug-resistant tuberculosis alone. By 2050, AMR related complications will account for approximately ten (10) million human deaths and about \$100 trillion losses in the global gross domestic product. Both overuse and misuse/abuse of the antimicrobial agents in human and animal production practices have been documented to be responsible for the current crises, each side sometimes apportioning blame to the other.

In Kenya, the available scanty data indicate that AMR is already here with us. Some recent reports have shown a rising trend in AMR in key Gram positive and Gram negative bacterial pathogens including methicillin resistant *Staphylococcus aureus* (5–10%) from hospitalized patients, reduced susceptibility of community acquired pneumococci (19%), multi-drug resistant extended spectrum beta lactamase producing *Salmonella typhimurium* (65%) and *Vibrio cholerae* (68%) from outbreaks in Kenya. In addition, some key antimicrobial-resistant food borne pathogens including *Escherichia coli* (*E. coli*), *Salmonella enterica* and *Campylobacter* species have been reported with increasing frequency as causes of food-borne diseases ranging from mild gastroenteritis to life threatening systemic infections, such as those caused by non-typhoidal salmonella. These infections also pose a public health problem of global significance.

In livestock production, a few studies in Kenya have documented use of various medicines at farms including co-trimoxazole, trimethoprim, sulphadiazine, colistin, doxycycline, tetracycline, a variety of fluoroquinolones (enrofloxacin, norfloxacin and ciprofloxacin) and neomycin for treatment and prophylaxis especially for rearing of birds. Consequently, *E. coli* isolates from these subsistence farming households were shown to be more frequently resistant to tetracycline (60%), co-trimoxazole (54%) streptomycin (42%), ampicillin (30%), and quinolones and third generation cephalosporins at varying frequencies (15–35%). Another study showed that *E. coli* isolates from beef carcasses were resistant to tetracycline, ampicillin and co-trimoxazole with a third of these isolates being resistant to two or three antimicrobials. Similarly, *E. coli* isolates from retail beef samples were resistant to ampicillin (31%), tetracycline (20%) and 4% were resistant to nalidixic acid and ceftazidime, with 27% showing multidrug resistance. In the western part of Kenya, *Salmonella choleraesuis* from presumed free range pigs supposedly reared without use of antimicrobials were found to be multiple resistant

to commonly available antimicrobials including sulphonamides (45.2%), nalidixic acid (44.25%), tetracycline (42%), ampicillin (36.8%), erythromycin (34.7%), carbenicillin (31.5%). It is possible that the pigs may be picking up foodstuff containing antimicrobials from the environment or perhaps farmers did not admit to the use of antimicrobials. These issues highlight the complexity of the health and food systems as well as the governance structures in which containment of AMR must thrive. Therefore, a work plan that takes a One Health approach involving all relevant sectors and stakeholders is critical in guiding implementation of the AMR NAP as well for strategic resource mobilization and allocation.

1.2. Prevailing gaps, challenges and opportunities for prevention and containment of antimicrobial resistance in Nyeri county

Like the rest country, data on antimicrobial use (AMU) and AMR is scanty. Nevertheless, Nyeri County continues to take steps aimed at improving the local understanding of the use of antimicrobials and the extent of AMR to guide interventions on its prevention and containment. Antibiotic Prescribing Audits conducted internally at the Nyeri County Referral Hospital and at Karatina County Hospital in the FY 2019/2020 reported the proportion of prescriptions with at least one antibiotic at between 42% - 61% and 31.3% – 52.4% respectively, which was high compared to the WHO recommendation of between 21% to 26% .

The county faces numerous challenges across the human, animal, agriculture and environment health sectors, thus slowing down the efforts on mitigating against AMR. Some of these challenges include:

- Limited baseline data to understand the trends and patterns of AMU, antimicrobial consumption (AMC) and AMR.
- Inadequate linkages and coordination between the national and county levels, and among the partner organizations that support AMR related activities. There is also weak interdepartmental coordination that lead to inefficiencies.
- Limited awareness and understanding of the problem of AMR among members of the public, including farmers who are heavy users of antimicrobials for food production.
- AMR is not perceived as an immediate public health concern by most practitioners in environment, animal, agriculture and human health sectors.
- Rampant inappropriate use of antimicrobials across the sectors through self-medication, over-the-counter sales, addition of antimicrobials to animal feed coupled with uncontrolled use of antimicrobials for prophylaxis in both humans, animals and agriculture.

The development of standard values for the WHO drug use prescribing indicators. Available at http://archives.who.int/icium/icium1997/posters/1a2_txt.html#:~:text=Derivation%20of%20standard%20values%20for%20the%20prescribing%20indicators&text=Standard%20Value%20for%20a%20prescribing.case%20*%20indicator%20value%20assigned).

- Weak enforcement of guidelines and policies aimed at controlling inappropriate use of antimicrobials.
- Inadequate understanding of the link between Infection Prevention and control (IPC), the use of antimicrobials and the development of AMR. This has led to poor IPC practices, further fuelling inappropriate use of antimicrobials.
- Inadequate capacity of microbiology units in county hospitals and animal health laboratories limiting AMR related surveillance efforts. There are also weak linkages to central laboratories that have the required microbiology capacity.
- Erratic supply of antimicrobials for managing infectious conditions hence limiting choice and prudent use by practitioners.
- Limited local research on the drivers of AMU/AMC, extent of antimicrobial use in humans and agriculture, the burden and patterns of infectious diseases, data on susceptibility patterns of microbes to the available antibiotics among others.
- Unclear channels for reporting and sharing information among stakeholders on matters related to AMU/AMC and AMR

Despite these challenges, there are plenty of opportunities in the county for improving the joint response to the public health threat of AMR. They include:

- The growing interest and support by the county leadership led by H. E. the Governor and the County Executive Committee Members, Chief Officers and Directors of the lead Departments (Health, Agriculture and Environment.)
- Support and guidance by NASIC on coordination of interventions targeted at preventing and containment of AMR.
- The existence of partners supporting AMR containment activities across the lead sectors.
- The establishment and ongoing strengthening of the Nyeri CASIC that brings together stakeholders from public and private sectors from across human health, agriculture and environment for better coordination of AMR activities in the county.

1.3 The AMR coordination mechanism for Nyeri County

Antimicrobial resistance affects many sectors and has an impact on the whole of society. Overall, implementation of the AMR NAP at the national level is coordinated by the multisectoral/ multidisciplinary body, NASIC. The different segments for AMR coordination in Nyeri County are as follows:

1.3.1 County Antimicrobial Interagency Stewardship Committee (CASIC)

To effectively coordinate with NASIC in implementation of the NAP, at the county, the lead departments for health and agriculture spearheaded establishment of CASIC which was launched by H. E. the Governor of Nyeri County on 18th March 2019. The Nyeri CASIC is composed of multiple stakeholders representing health, agriculture (livestock, aquaculture, crops, environment) and environment from various departments and organizations. Among the membership of the CASIC include the County Executive Committee Members (CECMs), County Chief Officers of relevant departments, Technical County Directors and various relevant One Health experts and representatives from government and private sector.

To smoothly facilitate synchrony and harmony among the many stakeholders and partners in the implementation of the NAP, the Nyeri CASIC has adopted the structure of coordination that is proposed by the AMR NAP. The CASIC links directly to the NASIC as well as the office of the intergovernmental relations and other partners (donors and development partners among others). Below the CASIC is the secretariat (focal persons in health, agriculture and environment) and the various thematic technical working groups (TWGs) that are aligned to the first four strategic objectives of the AMR NAP. See the organogram in Figure 1 below.

The following are the terms of reference for CASIC:

- Mobilize resources and approve budgets and work plans for implementation of AMR NAP at the county level.
- Mobilize human and financial resources to support the plan through regular budget allocations, mainstreaming of activities within core programmatic areas.
- Enforce guidelines, rules and regulations in accordance with existing laws, as may be necessary, related, incidental, or consistent with the purpose, intent, and objective of the AMR NAP on the prevention and containment of AMR.
- Submit to the NASIC regular status reports, budgets, and policy proposals on the implementation of the national plan.
- Collaborate with and coordinate activities with other counties, national government and non-state actors.
- Monitor and evaluate the implementation of the AMR NAP.

1.3.2 Intergovernmental coordination mechanisms and relations

The intergovernmental relations serve to facilitate greater intergovernmental cooperation and consultation under the devolved government model. The county government of Nyeri will use these structures during the implementation of the AMR NAP to facilitate adequate cooperation from the national government.

1.3.3 County AMR Secretariat

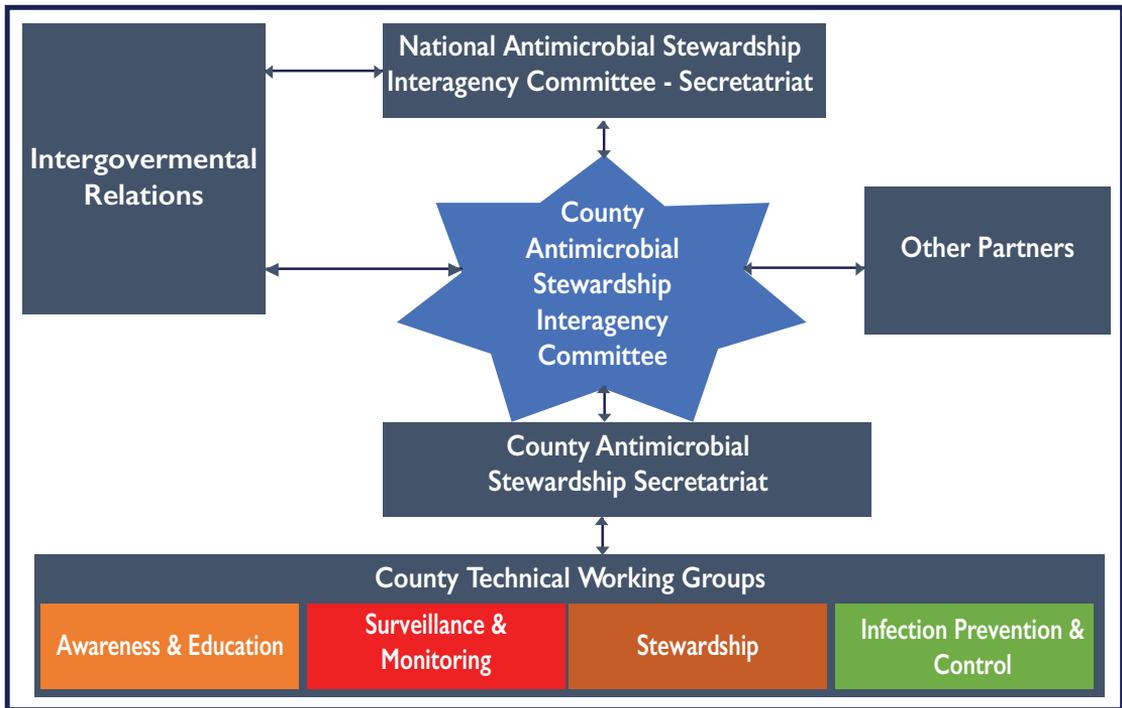
The secretariat is comprised of Focal Persons representing the relevant key sectors (health, agriculture and environment). Their main responsibilities include:

- Providing the link between CASIC and NASIC.
- Ensuring a continuous county AMR stakeholder engagement.
- Representing CASIC in meetings, conferences, stakeholder meetings and other relevant forums.
- Supporting the functions of the CASIC TWGs.

1.3.4 The Technical Working Groups

The technical working groups (TWGs) are organized around four strategic objectives of the AMR NAP. Their main responsibility is to provide technical support in implementing the various thematic areas as shown in figure 1.

Figure 1. Coordination structure for the Nyeri CASIC



1.4 Operationalization of AMR NAP

The goal of the AMR NAP is to ensure, for as long as possible, continuity of successful treatment and prevention of infectious diseases with effective and safe medicines that are quality-assured, used in a responsible way, and accessible to all who need them. To achieve this, the AMR NAP addresses five strategic objectives, four of which this work plan aims to implement. These include:

1. Improve public awareness and understanding, and promote education and training of professionals
2. Continuously monitor antimicrobial resistance and use of antimicrobials, and appropriately understand the trends and spread of antimicrobial resistance
3. Prevent the spread of antimicrobial-resistant organisms by implementing appropriate infection prevention and control measures
4. Promote appropriate use of antimicrobials in the fields of healthcare, livestock production, agriculture and aquaculture

This work plan has focused on specific activities that will address each of the above strategic objectives. CASIC will coordinate its implementation and there will be an internal M&E template that will monitor the progress (see the section on M&E).

CHAPTER 2 – THE CASIC WORK PLAN

2.1. Strategic objective I: Public Awareness and Education

The population is at risk of exposure to antimicrobial resistant microorganisms through human-human-animal transmission, food, the environment or other transmission routes. Where antimicrobials are available over the counter the general public procures for use either on self or animals. This lack of awareness on AMR among the service providers in health and agriculture has contributed to the emergence and spread of AMR. Technical personnel handling antimicrobial agents have knowledge gaps and communicating the risks of AMR will be very important not only to the general public but also to county government officials and others involved in the antimicrobial supply chain including medical and veterinary practices. Measures will be put in place to raise awareness of AMR and promote behaviour change through communicating the risks of emerging AMR across all sectors. Public communication programs targeting different audiences in human health, environment, animal health and agricultural practice as well as consumers, will be developed to promote better understanding and awareness. The Nyeri CASIC public awareness and education technical working group (TWG) will:

- a) Enhance multisectoral communication i.e. a “One Health” communication approach to AMR in the county.
- b) Develop and/or adopt national tools for public communication and awareness creation on antimicrobial use (AMU) and importance of prevention and containment of AMR.
- c) Develop and deploy effective and varied communication tools and approaches to influence multisectoral behavioral change.
- d) Disseminate developed AMR messages to stakeholders within the county.

Human Health Sector

Strategic intervention 1.1 Raise public awareness on AMR														
Activity	Sub-activities/ Tasks	Indicators	Targets	Means verification	Responsibilities	Cost	Time frame (2020/2022)							
							2020/21				2021/22			
							Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1.1.1. Organize and celebrate the World Antimicrobial Awareness Week	1.1.1.1 Hold a virtual CME on AMR for County health workers	Percentage of county healthcare workers sensitized	50%	List of attendance Program, CME report Photos	County Antimicrobial Stewardship Focal person	61,000	X				X			
	1.1.1.2 Hold a 'One Health' health talk on AMR targeting the community (in churches, boda boda riders and PSV associations)	Number of community members reached with One Health talk on AMR	500	Program Health talk report	County Antimicrobial Stewardship Focal person	376,000	X				X			
	1.1.1.3. Hold health talks for the patients in level 4 & 5 public hospitals	Number of health talks on AMR/AMU held	8	Program Health talk report	Hospital's AMS focal person	0	X				X			
	1.1.1.4. Organize a walk for health workers around Nyeri town.	Number of walks organized	2	Program Report	County Antimicrobial Stewardship Focal person	500,000					X			
1.1.2 Conduct countywide AMR awareness campaign	1.1.2.1 Jointly - Health, Agriculture & Environment sectors - review, customize and adopt the NASIC communication strategy	Reviewed and customized NASIC communication strategy in place	1	CASIC communication strategy	County Antimicrobial Stewardship Focal person	516,500			X					
	1.1.2.2. Hold biannual radio talk shows	Number of radio talk shows held	6	Recorded radio talk audios Radio talk show report	County health promotion officer	471,000	X		X		X			X

Animal Health, Agriculture and Environment Sector

Strategic Intervention 1.1. Promote public Awareness, Knowledge and Understanding on AMR																	
Activity	Sub activities	Indicator	Target	Means of Verification	Responsibility	Cost	2020-2021				2021-2022						
							Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
1.1.3 Constitute the TWG	1.1.3.2 Develop ToRs for TWGs	Number of ToRs prepared	1 TOR	TOR	County Directors of Vet, Livestock production, crops & fisheries	20000			X								
	1.1.3.3 Appoint TWG members	Number of TWGs members appointed	5 members appointed	Appointment letters	County Directors of Vet, Livestock production, crops & fisheries				X								
	1.1.1.1 Develop AMR IEC materials for use by each implementing entity	Number of IEC materials developed	3,000 posters for each implementing entity	IEC materials	Agriculture AMS focal persons in Nyeri County	300,000		X	X	X	X	X	X	X	X	X	X
1.1.1 Create awareness on AMU through varied communication methodologies	1.1.1.2 Educate Farmers and members of the public on AMR and appropriate antimicrobial use through mass media	Number of radio talk shows	4 radio talk shows	Video clips or recordings	AMR focal persons in Nyeri County	0 Combined with Health dept activity	X		X								
	1.1.1.3 Organize events and participate in World Antimicrobial Awareness Week (WAAW) 2020	Number of events held during the WAAW	2 Exhibitions, 2 Band marching & baraza, 16 school visits, 2 scientific conferences, 2 Field days	Reports for AMR week, video clips	CECM Agriculture, Environment & Health, Nyeri County	1,475,000		X				X					
	1.1.1.4 Hold 2-day seminar with agro-dealers to create awareness on AMU/AMR	Number of agro dealers reached with AMU/AMR information	150 dealers (across 30 wards) 8 seminars (1/sub county)	Awareness seminars reports	County Directors of Vet, Livestock production, crops & fisheries	900,000			X				X	X	X	X	X

Strategic intervention 1.2 Promote Education and Training on AMR of professionals involved in related fields														
Activity	Sub activities	Indicator	Target	Means of Verification	Responsibility	Cost	2020-2021				2021-2022			
							Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1.2.1 Train professionals engaged in Agriculture, livestock, fisheries and environment on AMR	1.2.1.2 Train trainers (ToT) on AMR	Number of trainers trained on AMR	64 ToTs trained in 1 training session	Training reports	County Directors of Vet, Livestock production, crops & fisheries	461,000			X	X				
	1.2.1.3 Train Animal Health service providers and other professionals (agriculture, livestock & fisheries, water, environment) on AMR	Number of professional trained on AMR Number of training meetings	320 officers trained (public & private) 8 training meetings	Training reports	County Directors of Vet, Livestock production, crops & fisheries	641,600			X	X				

2.2. Strategic objective 2: Surveillance and Monitoring

Knowledge on antimicrobial use and drivers of AMR including practices and behaviour and its impact on all sectors is critical for addressing AMR. Lack of an integrated surveillance system and weak laboratory capacity for detection and reporting antimicrobial resistance limits the availability of evidence to support decision making. The county will therefore initiate actions for continuous data collection alongside risk mitigation. Surveillance data will support evidence-based decision making, identification of priority areas for action and communicate the importance and impact of AMR to stakeholders and decision makers.

The Nyeri CASIC surveillance and monitoring TWG will:

- a) Facilitate the development of capacity of the laboratories to support AMR surveillance.
- b) Coordinate implementation of the national surveillance strategy in the county.
- c) Facilitate the transmission of data on AMR and consumption to the national government.

Strategic intervention 2.1. Capacity building for health workers														
Activity	Sub-activities/Tasks	Indicator	Target	Means of Verification	Responsibilities	Cost	Time frame (2020/2022)							
							2020/2021				2021/2022			
							Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
2.1.1. Train health workers on bacteriology techniques, AMR surveillance, data collection, analysis and interpretation.	2.1.1.1. Train NCRH laboratory personnel on in-depth bacteriology techniques	Number of laboratory personnel trained on in-depth bacteriology techniques	6	List of attendance Program Training report	NPHL/NASIC	369,000			X					
	2.1.1.2. Train CASIC on AMU/AMR data collection, analysis and utilization	Number of CASIC members trained on AMU/AMR data collection, analysis and utilization	20	Training program, lists of attendance and training report	NASIC	1,232,000			X					
	2.1.1.3. Train health workers (Clinicians, Pharmacists, nurses and laboratory personnel) on AMR surveillance, data collection and interpretation at NCRH.	Number of trained health workers on AMR surveillance, data collection and interpretation at NCRH	300	List of attendance Program Training report	Facility AMS/MTC coordinator,	486,000			X	X	X	X	X	X
Strategic intervention 2.2. Streamline communication between Microbiology and user departments at NCRH														
2.2.1 Streamline communication between Microbiology, Pharmacy and	2.2.1.1. Conduct meetings for the lab staff, clinicians and pharmacists to discuss microbiology	Number of sessions or interactions between the clinical, pharmacy and	20	Monthly communication logs	Laboratory Manager	0		X	X	X	X	X	X	X

	2.4.1.3. Disseminate bi-annual CASIC activities reports/bulletins	Number of health facilities that receive AMR/AMU bulletin	20	CASIC activities reports	County Antimicrobial Stewardship Focal person	200000	X	X	X	X	X	X	X
Strategic intervention 2.5. Increase access to quality Bacteriology services													
2.5.1 Increase access to quality Bacteriology services in level 4 & 3 public health hospitals	2.5.1.1. Train level 3 and 4 laboratory staff on proper sample collection and packaging.	Number of laboratory staff trained on proper sample collection and packaging.	16	List of attendance Program Training report	Head of bacteriology/NASI C/CMLC	105,600	X	X	X	X	X	X	X
	2.5.1.2. Train clinical staff in levels 4 and 5 hospitals on proper sample collection	Number of staff trained	300	Training report	CMLC	1,410,000	X	X	X	X	X	X	X
	2.5.1.3. Sensitize riders and other specimen transporters on handling/transportation of bacteriology specimens.	Number of riders and specimen transporters sensitized on handling/transportation of bacteriology specimens	7	List of attendance Program Training report	CMLC	26,900	X	X	X	X	X	X	X
	2.5.1.4. Integrate bacteriology specimen referrals into the existing referral network	Number of bacteriology specimen received at NCRH from peripheral health facilities	3000	Specimen referral logs	CMLC	42,000	X	X	X	X	X	X	X
	2.5.1.5. Enroll NCRH laboratory into the National AMR surveillance quality assurance program	Proportion of bacterial isolates submitted to NMRL/NPHL monthly	5%	Isolates logs	Laboratory manager/Head of Bacteriology	0	X	X	X	X	X	X	X

Strategic Intervention 2.2 Improve the capacity for AMR testing in Vet. laboratories

Activity	Sub activities	Indicator	Target	Means of Verification	Responsibility	Cost	2020-2021				2021-2022				
							Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
2.2.1 Link the county AMR Lab with RVIL Karatina	2.2.2.1 Sign MoU for collaboration between County AMR Lab with RVIL Karatina	Signed MoU in place	1 MOU developed for collaboration	Copy of MoU	CASIC & County Directors of Vet, Livestock production, crops & fisheries In-charge VIL Karatina	50,000					X				
2.2.2 Upgrade the County Vet lab to offer AMR testing	2.2.1.1 Acquire samples storage facilities for antibiotics residue testing	Number of sample storage facilities acquired	1 Freezer 1 Refrigerator 8 cool boxes	Delivery reports	CASIC & County Directors of Vet, Livestock production, crops & fisheries In-charge VIL Karatina	340,000				X	X	X	X		X
2.2.3 Establish a specimen referral system to increase access to antibiotics residues and AMR testing services	2.2.3.1 Hold consultative meetings with stakeholders on establishment of a specimen referral system for animal health sector 2.2.3.2 Establish and roll out the Specimen referral system	Number of consultative meetings	8	Meeting notes	CASIC Agriculture AMU/AMR focal person RVIL in-charge	160,000				X	X	X	X		X
	2.2.3.2 Establish and roll out the Specimen referral system	Number of sub counties with access to the specimen referral system	8	Specimen referral logs	CASIC Agriculture AMU/AMR focal person,	0				X	X	X	X		X
		Number of AMR or Antibiotic residue specimen referred through the system	600	Laboratory reports	In charge VIL Karatina	0									
2.2.4 Conduct training for surveillance, and microbiology	2.2.4.1 Develop a training manual for monitoring	Number of Training Manuals developed	1	Copy of the training manual	County Directors of Vet, Livestock production, crops & fisheries	0				X					

2.3. Strategic objective 3: Infection Prevention and Control

Hygiene and IPC are essential to limit the development and spread of antimicrobial resistant infections and multidrug-resistant bacteria. To prevent transmission of antimicrobial resistant organisms the following are core components of infectious disease prevention: prevention and control, biosecurity, sanitation, hand hygiene, food and water safety; hygiene in animal premises and farms and vaccination (where appropriate); and sustainable husbandry practices. These actions if well implemented, reduce the need for antimicrobials as well as the risk of development and spread of antimicrobial-resistant organisms. Prophylactic use of antimicrobial in humans and animals, to prevent the infection and spread of diseases, and their use as growth promoters should be discouraged as they aid the development of AMR. Use of vaccines can reduce infection rates and dependence on antibiotics. The Nyeri CASIC IPC TWG will:

- a) Ensure appropriate deployment of appropriate technical staff to support implementation of national IPC guidelines.
- b) Ensure appropriate employment and deployment of appropriate technical staff to support implementation of good animal husbandry practices
- c) Support and monitor the implementation and compliance to IPC guidelines.
- d) Consider providing incentives for utilization of disease preventive measures and vaccines as alternatives to prophylactic antimicrobial use.

Strategic Objective 3: Reduce the incidence of infection through effective sanitation and hygiene														
Strategic intervention 3.1. To reduce the incidence of health care associated infections (HAIs)														
Activity	Sub-activities / Tasks	Indicators	Target	Means of verification	Responsibility	Cost (KSH)	Time frame							
							2020/21	2021/22	Q1	Q2	Q3	Q4	Q1	Q2
3.1.1. Strengthen the county IPC governance structure	3.1.1.1: Reconstitute the County IPC committee to include key focal persons in public and private hospitals, and partners.	Number of CIPC members representing the public and private hospitals and partners	10 members from hospitals and partners	Appointment letters	County Health Director	0		X						
		Number of CIPC members	15 members of the CIPC											
	3.1.1.2: Train the county IPC committee members as well as the sub county IPC focal persons & 8 IPC hospital focal persons.	Number of CIPC members and sub-county IPC focal persons trained	30	Training report with action plans	County IPC coordinator	684,500			X					
	3.1.1.3 Appoint the sub county IPC focal persons	Number of IPC focal person appointed	8	Appointment letters with terms of reference	County Director of Health	0		X						
	3.1.1.4 Develop a comprehensive work plan for IPC activities	IPC Work Plan 2020/2021 in place	1 Work Plan	Work plan document	County IPC coordinator	483,500		X						

	3.1.1.5 Conduct quarterly county IPC meetings	Number of quarterly meeting held	4 per year	Minutes of meetings	CDH	542,500		X	X	X	X	X	X	X	X	X	X	X
	3.1.1.6 Conduct supervision to hospital IPC committees	Number of hospitals supervised per quarter	8 Hospital IPC supervised on quarterly basis 32 supervisory visits per year	Supervision reports with improvement plans	County IPC Coordinator	403,200		X	X	X	X	X	X	X	X	X	X	X
	3.1.1.7 Conduct IPC mentorship to hospital IPC committee	Number of hospitals mentored per month	8 Hospital IPC mentored on monthly basis 96 mentorships visit per year	IPC mentorship reports		957,600		X	X	X	X	X	X	X	X	X	X	X
	3.1.1.8 Conduct supervision on IPC and WASH for rural health facilities.	Number of hospitals supervised per quarter	123 rural health facilities supervised per quarter No of 492 facility visit per year	Supervision reports with improvement plans	Sub-county IPC focal person	3,099,600		X	X	X	X	X	X	X	X	X	X	X
	3.1.1.9 Conduct quarterly peer review meetings for IPC focal persons at hospitals and sub county levels	Number of peer review meeting held	4 meeting per year	Minutes of meetings	County IPC Coordinator	542,500		X	X	X	X	X	X	X	X	X	X	X
Activity 3.1. 2: Develop and establish Hand Hygiene program in 8 hospitals	3.1.2.1 Identify hand hygiene champions in hospitals	Number of champions identified	16	Nomination letters signed by Med Sup.	Hospital Superintendent	0		X										

	3.1.2.8 Write scientific papers on hand hygiene audits	Number of scientific papers written	8	Available scientific papers	Hospital IPC focal person	80,000		X	X	X	X	X	X	X	X	X	X	X
	3.1.2.9 Present scientific papers during conferences.	Number of scientific papers presented during conferences	5	Scientific papers approved for presentation in scientific conferences Letter for invitation to present papers Conference program	County Director of Health	270,000			X	X	X	X	X	X	X	X	X	X
Activity 3.1.3 Implement Surgical Site Infections (SSI) bundles in 8 hospital	3.1.3.1 Develop a protocol on antimicrobial surgical prophylaxis	SSI protocol developed	Antibiotic SSI protocol in place	Approved SSI protocol	County AMR focal person	218,600	X											
	3.1.3.2 Train health care workers and surgical teams on SSI bundles in the 8 county hospitals	Number of staff trained in maternity, surgical wards and theatre from 8 hospitals on SSI bundles	120	Training reports SSI bundles Continuous Quality Improvement plans	County IPC coordinator	480,000		X	X									
	3.1.3.3 Include SSI bundles Forms on patient files in 8 hospitals	Number of hospitals with SSI forms in patients' files	8	SSI bundles implementation reports	Hosp. Supt.	6,000	X											
	3.1.3.4 Monitor adherence to SSI bundles in the 8 county hospitals	Number of hospital monthly reviews on surgical patients' files	12 review per hospital per year	SSI bundles implementation reports	Hospital IPC focal person	171,000												
	Provide feedback on monthly basis to the surgical teams on the use SSI bundles	Number of review meeting to surgical teams	12 feedback meeting per hospital	Minutes of the feedback meeting	Hospital IPC focal person	294,000												

Strategic Objective 3: Reduce the incidence of infection through effective Sanitation, Hygiene and IPC Measures										
Strategic intervention 3.1 Improve animal husbandry practices and nutrition										
Activity	Sub-activities / Tasks	Indicators	Target(s)	Means of verification	Responsibility	Cost (Kes)	Time frame			
							2020/21	2021/22		
Activity 3:1:1 Train farmers on housing designs, hygiene, nutrition biosafety and biosecurity	3.1.1.1 Develop training materials on hygiene, nutrition biosafety and biosecurity	Number of training materials developed	2 (1 hygiene and sanitation, 1 biosafety & biosecurity)	Training materials	Directors of Vet & Livestock production,	150,000	X	X	X	X
	3.1.1.2 Develop housing designs	Number of designs developed	5 (designs 1 dairy, 1 poultry, 1 Pigs, 1 shoats, 1 fish)	Designs	Directors of Vet & Livestock production,	0	X	X	X	X
	3.1.1.3 Train farmers on housing designs, hygiene, biosafety and biosecurity	Number of farmers trained	400 (200 per year)	Training report	Directors of Vet & Livestock production,	200,000	X	X	X	X
	3.1.1.4 Train farmers on good animal nutrition and feed formulation	Number of farmers trained	400 (200 per year)	Training report	Directors of Vet & Livestock production,	0	X	X	X	X
Strategic intervention 3.2 improve on pre- harvest and post- harvest handling of agricultural products										
Activity 3:2:1 Disseminate information on pre- harvest and post- harvest handling of agricultural products	3.2.1.1 Develop IEC/training materials	Number of types of IEC/training materials developed	2 documents (1 pre-harvest and 1 post-harvest)	IEC/training materials	Directors of Vet & Livestock production,	668,600	X	X	X	X
	3.2.1.1 Disseminate information on pre- and post-harvest handling to farmers	Numbers of farmers reached on pre and post-harvest handling	200	Dissemination forum report	Directors of Vet & Livestock production,	0	X	X	X	X

		Number of dissemination forums conducted	8 forums (1 per sub-county)																
Strategic intervention 3-3 improve pharmaceutical and agricultural waste management																			
Activity 3-3:1 Sensitize staff and farmers on proper waste disposal	3.3.1.1 Develop training materials on waste disposal	Number of training materials	2(1 for ToTs, 1 for farmers)	Documents	Directors of Vet & Livestock production,	0													
	3.3.1.2 Train staff as ToTs	Number of staff trained	16 staff trained (2 from each sub county)	Report	Directors of Vet & Livestock production,	0													
	3.3.1.3 Train 100 farmers per sub county on waste disposal	Number of farmers trained	800	Report	Report	Directors of Vet & Livestock production,	0												
Activity 3-3:2 Provide incinerators for pharmaceutical and agricultural waste	3.3.2.1 Contract licensed chemical waste collection service provider (to provide bins)	Number of facilities covered by the chemical waste service provider	10	Licenses, invoices and schedules	Director Environment	15,850,000													
	3.3.2.2 Procure and install mini-incinerators	Number of mini-incinerators installed	2	Pictures, delivery and inspection notes, invoices,		6,600,00													
Strategic intervention 3-4 improve on proper use of pesticides on animals and plants																			
Activity 3-4:1 Conduct a survey on use of pesticides by farmers and agro-dealers by distribution by agro-dealers	3.4.1.1 Develop questionnaires targeting agro-dealers and farmers	Number of types of questionnaire developed	2	Administered questionnaires,	Directors of Vet & Livestock production,	0													
	3.4.1.2 Conduct survey on use of pesticides by farmers and distribution by agro-dealers (targeting 40 agrovet – 5 from each major; 90 farmers – per 3 wards)	Number of surveys conducted	1	Survey report	Survey report	Directors of Vet & Livestock production,	179,600												

2.4. Strategic objective 4: Appropriate Use of Antimicrobials

Antimicrobial agents are used in human, terrestrial and aquatic animals and plant production practices for both therapeutic and non-therapeutic purposes. AMR is driven by the volume of use reflected in over-prescription and unrestricted access. This is complicated by a complex pharmaceutical system compromised by the existence of illegal medicine outlets. In regions where private professional human and agricultural services are not viable, and the government has not deployed enough personnel, the public has no access to technical support for appropriate antimicrobial use. Further, the inadequate utilization of laboratory diagnostic services and lack of microbiology laboratories has contributed to indiscriminate use of antimicrobials. Non-compliance to good practices along the medicine manufacturing, supply, distribution and use chain by professionals and non-professionals is another significant contributor to the emergence of AMR.

The Nyeri CASIC TWG on appropriate use of antimicrobials will:

- a) Ensure uninterrupted access to essential antimicrobial agents at all levels of care.
- b) Ensure that antimicrobials are distributed, prescribed and dispensed as per developed standards and guidelines.
- c) Strengthen diagnostic services for human and animal health to support prudent use of antimicrobials.

Strategic Intervention 4.1: Establish AMS structure and program in Nyeri County

Activity	Sub-activities / Tasks	Indicators	Target	Means of verification	Responsibility	Cost (Kes)	Time frame											
							2020/21				2021/22							
							Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
Activity 4.1.1: Reconstituting the AMS committee membership at different health governance levels in the County.	4.1.1.1 Appoint County AMS focal person	AMS focal person appointed	1 AMS Focal person	Appointment letter	CDH	0		X										
	4.1.1.2 Integrate AMS into County MTC	County AMS sub-committee formed	1 AMS Sub committee	-Minutes -Formal Communication	County AMS Focal Person	28,000		X										
	4.1.1.3 Integrate AMS into Hospital MTCs.	Number of hospitals AMS sub-committees integrated	8 hospital AMS Sub committees	-Minutes -Formal Communication	Hospital AMS Focal Persons	135,500		X										
Activity 4.1.2 Streamline AMS in the County	4.1.2.1 Disseminate national AMS guidelines at county and facility levels	Number of sensitization meetings held	8 Hospitals 126 Rural Health Facilities	-Report -Formal Communication	County and Hospital AMS Focal Persons	0		X					X				X	
	4.1.2.2 Integrate AMS activities into Health AWP	AMS activities integrated into health AWP	1 integrated AWP	Health AWP with AMS activities	County AMS Sub Committee	0							X					X
	4.1.2.3 Develop 3 AMS guiding tools (Guides for Antibiotics Pre-authorization; Point Prevalent Surveys;	Number of AMS guiding tools developed	3 AMS tools developed	AMS guiding tools e.g. AWARe categorization of Antibiotics, prospective audit	County AMS Sub Committee	340,000		X						X				

	and Antibiotics prescribing audits)																			
Activity 4.1.3 Build county workers' capacity on AMS and AMU	4.1.3.1 Train hospital MTCs on AMS	Number of hospitals MTC trained on AMS	8 Hospital MTCs	Training Report	County AMS Sub Committee	317,000	X													
	4.1.3.2 Hold Sensitization meetings on AMS in hospitals	Number of health care workers sensitized on AMS /	500	Sensitization report.	County AMS Focal person/Hospital AMS focal persons	213,000	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Strategic Intervention 4.2: Reduce inappropriate use of antimicrobials at health care facilities

Activity	Sub-activities / Tasks	Indicator	Target	Means of verification	Responsibility	Cost (Kes)	Time frame														
							2020/21				2021/22										
							Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4							
4.2.1 Implement AMS interventions to control use of antimicrobials at county health facilities	4.2.1.1 Hold quarterly sensitization meetings on the tools for appropriate use of antibiotics targeting hospitals	Quarterly sensitization meetings held	7 meetings	Minutes	County AMS Focal person/Hospital AMS focal persons	356,000		X				X					X				X

	4.3.1.2	Hold quarterly sensitization meetings on the tools for appropriate use of antibiotics targeting rural health facilities (RHFs).	Quarterly sensitization meetings held	7 meetings	Minutes	County AMS Focal person/Hospital AMS focal persons	356,000		X	X	X	X	X	X	X
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Strategic Intervention 4.3: Increase access to Antibiotics across county health facilities

Activity	Sub-activities / Tasks	Indicator	Target	Means of verification	Responsibility	Cost (Kes)	Time frame								
							2020/21				2021/22				
							Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
4.3.1 Strengthen commodity management at health facility level	4.3.1.1	Train health care workers in 8 hospitals on health commodity management and other factors that affecting access to antimicrobials	25	Training Report	County Pharmacist	244,000		X							
	4.3.1.2	Train health care workers from RHFs on commodity management	140	Training Report	County Pharmacist	1,246,000		X		X				X	
	4.3.1.3	Hold quarterly commodity security meetings targeting officers managing health commodities	7	Minutes	County Pharmacist	0		X		X				X	

4.3.1.4	Redistribute surplus antibiotics and medicines among health facilities during routine quarterly support supervision	Quarterly Redistribution exercise	7	Supervision report	County Pharmacist	0	X	X	X	X	X	X
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Animal Health, Agriculture and Environment Sector

Strategic Objective 4: Optimize use of antimicrobial use in human and animal health

Strategic intervention 4:1 Minimize the use of antimicrobials in animal health

Activity	Sub-activities / Tasks	Indicators	Target(s)	Means of verification	Responsibility	Cost (Kes)	Time frame					
							2020/21	2021/22				
Activity 4:1:1 Undertake a baseline study on AMU in animals and plants in Nyeri County	4.1.1.1 Develop questionnaires on AMU, targeting Agro-vet dealers, AHSPs and farmers	Baseline survey tools developed	3	Baseline survey tools	County Directors of Vet, Livestock production, crops & fisheries	160,200	X	X				
	4.1.1.2 Undertake baseline study on AMU in animals and plants in Nyeri County (targeting 130 respondents)	Baseline survey undertaken	1	Baseline survey report								
Activity 4:1:2 Undertake baseline study on AMU in Aquaculture in Nyeri County	4.1.2.1 Develop questionnaires on AMU in fish farming	Baseline survey tools developed	1	Baseline survey tools	County Director of Fisheries	Done	X	X				
	4.1.2.2 Undertake baseline study on AMU in Aquaculture (targeting 100 respondents)	Baseline survey undertaken	1	Baseline survey report								
Activity 4:1:3 Train agro-vet dealers, AHSPs and farmers on prudent use of antimicrobials	4.1.3.1 Develop training materials on prudent use of antimicrobials	Number of training materials	2	Training materials		0				X		
	4.1.3.2 Train agro-vet dealers, AHSPs and farmers on prudent use of antimicrobials	Number of persons trained	180 (40 AHSPs, 40 agro vet dealers, 100 farmers)	training reports	County Directors of Vet, Livestock production, crops & fisheries							

CHAPTER 3 – MONITORING AND EVALUATION

3.1 Introduction

The work plan provides a common framework for action by all stakeholders in Nyeri County drawn from different sectors, including human health, animal health, crops, aquaculture and environmental sectors together with the civil society in managing and implementing appropriate AMR control activities. The purpose of this M&E section is to track the progress of proposed interventions in the work plan and to assess their effectiveness, efficiency and relevance to the attainment of the overall goal. The data collected will inform the implementing stakeholders and decision-makers as to whether they are on track and where changes can be made in the present time or in future action planning. It thus provides a common platform across the different sectors and levels of Government, for monitoring and evaluation of performance.

The Government of Kenya considers monitoring and evaluation as an essential component of its efforts to improve the effectiveness and quality of its functions. The National Integrated Monitoring and Evaluation System (NIMES) recommends the monitoring and evaluation of the implementation of all Government policies, programs and projects. It further states that every institution or body that is spending public resources in the public interest has a responsibility to facilitate the M&E of its programs. This is required at all levels of the Government including the devolved units of the County Governments. For this level, the guidelines for the development of County Integrated Monitoring and Evaluation Systems (CIMES) have been launched.

The alignment to the NIMES and CIMES documents are especially important for this framework because the two main sectors of Human Health and Agriculture are part of the devolved functions (schedule four of the Kenya Constitution). Therefore, the County Government departments of Health and Agriculture will be important stakeholders in the implementation of the work plan and tracking performance. This document provides a common approach for the work plan performance monitoring and evaluation across both the Human health sector and Animal health and Crop sector as well as both levels of Government.

3.2 Monitoring performance

The AMR prevention and containment actions bring together various stakeholders and the interventions described in the work plan are divided broadly into three parts of Human Health, Agriculture and Environment Sectors. The responsible Ministries / Departments / Agencies will monitor and evaluate the interventions identified in the work plan.

To ensure simplicity and ease of compliance, guidelines for development of CIMES recommends that projects should be monitored, and data collected at least quarterly, using the M&E reporting sheet template presented below. Therefore, the below template below will be utilized to monitor work plan implementation.

Table 1: M&E Reporting Sheet

County		Sector										
Sub-sector		Date										
Financial year		Responsible person										
Activity	Indicator	Q1 Target	Q1 Actual	Q2 Target	Q2 Actual	Q3 Target	Q3 Actual	Q4 Target	Q4 Actual	Annual target	Annual deviation	Comment/recommendation for correct action
Priority	Actions	Assigned to:		Due by:		Status						
!	SMART action required	Person Responsible for action		mm/dd/yyyy		Initial, Accepted, Not Agreed, Not Now, Off Track, On Track, Revoked, Closed						

3.3 Evaluation

Evaluation will involve a systematic and objective process of examining the relevance, effectiveness, efficiency, impact and sustainability of the strategies. There will be semi-annual and annual reviews based on the respective work plans developed by implementation teams.

Four major evaluation activities that will be undertaken include: baseline, ad-hoc evaluations, baseline evaluation, mid-term evaluation, and end-term evaluation.

Ad hoc evaluations will be conducted in case of significant and unexplained variance between the planned and achieved performance targets. Such variances will be identified through the regular bi-annual reports. Also, specific areas of interest will be identified and subjected to evaluation to determine effectiveness, efficiency, impact and sustainability of interventions.

Baseline will be done through desk review to determine baseline values. Mid-term Evaluation will examine the progress towards achieving the set targets. The evaluation will be spearheaded internally by a technical committee that will be appointed by the CECM. The End-term evaluation will be conducted at the end of the 2 years workplan period and will be Spearheaded by an independent expert with the guidance of the CECM/CEC. The achievements, challenges, lessons learnt, and recommendation will inform the next cycle of the work planning.

3.3 Reporting

The County AMR Secretariat will ensure monitoring and reporting on the progress of achievement of results and objectives based on the performance indicators in this work plan. This will be achieved by ensuring collection and provision of timely and accurate data during the plan period.

The implementing units will be expected to generate reports on quarterly and annual basis to present to management.

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