



Republic of Rwanda  
Ministry of Health

# ONE HEALTH POLICY

March 2021

## FOREWORD

Rwanda is at risk of occurrence and spread of emerging and re-emerging infectious diseases, which can affect socio-economic growth. The country has upped her prevention and control measures to avoid an epidemic level outbreak of emerging and re-emerging infectious diseases. Lessons learnt from the preparedness and prevention efforts for Ebola a few years ago especially with the epidemic level outbreak across the borders and more recently the emergency of the COVID-19 pandemic (successfully controlled thanks to the high level of preparedness) all highlight the need to design and implement programs, policies, legislation and research in which multiple sectors communicate and work together to achieve better public health outcomes through the One Health approach.

The One Health Policy has been developed to provide guidance on the planning, monitoring and evaluation of all activities under the One Health Approach countrywide and reflects shared commitments to enhance collaboration between environmental, plant, animal (wildlife and domestic) and human health, and continuing to build new One Health workforce capacity through higher institutions of learning. This policy also outlines key objectives to be undertaken by the Government institutions and other stakeholders to enhance existing structures and pool together additional resources to prevent and control zoonotic diseases, antimicrobial resistance, plant diseases, food safety and other events of public health importance.

Successful implementation of this policy will foster an enabling environment for institutional and operational collaboration and coordination among human, animals and environment by ensuring prevention, control, response and recovery from zoonotic diseases, plants and food safety hazards, antimicrobial resistance and other public health issues through multi-sectoral collaboration in capacity building, research and innovation as well as community services.

On this note, I would like to acknowledge the contributions of institutions, organizations and individuals who contributed technically to the development of this policy. Special thanks to USAID through ECTAD project/ FAO Rwanda Country Office for the financial support and valuable expertise provided throughout the whole process of the development of this policy. I call upon all concerned stakeholders to join us in implementing the One Health Policy in Rwanda


**Dr. NGAMIJE M. Daniel**  
**Minister of Health**

# TABLE OF CONTENTS

<a href="#">FOREWORD</a>	2
<a href="#">ACRONYMS AND ABBREVIATIONS</a>	4
<a href="#">1. INTRODUCTION</a>	6
<a href="#">1.1. Rationale for the National One Health Policy</a>	6
<a href="#">1.2. Alignment of One Health Policy and other policies and strategies</a>	8
<a href="#">1.3. Process to develop One Health Policy</a>	9
<a href="#">2. SITUATIONAL ANALYSIS</a>	11
<a href="#">3. POLICY ORIENTATION</a>	14
<a href="#">3.1. Vision</a>	14
<a href="#">3.2. Mission</a>	14
<a href="#">3.3. Values and guiding principles</a>	14
<a href="#">3.4. Objectives</a>	14
<a href="#">3.4.1. Overall Objective</a>	14
<a href="#">3.4.2 Specific Objectives</a>	15
<a href="#">3.5. Policy Directions</a>	15
<a href="#">4. Governance Framework</a>	20
<a href="#">4.1. Governance and Accountability</a>	20
<a href="#">4.1.1. One Health Multi-sectoral Coordination Mechanism (OH-MCM)</a>	21
<a href="#">4.1.2. Technical Working Groups (TWGs)</a>	21
<a href="#">4.1.3. Partnership and Stewardship</a>	22
<a href="#">4.2. Monitoring and Evaluation</a>	24
<a href="#">REFERENCES</a>	25

## ACRONYMS AND ABBREVIATIONS

<b>Acronyms</b>	<b>Abbreviations</b>
AMR	Antimicrobial Resistance
CAVM	College of Agriculture and Veterinary Medicine
CDC	Centre for Diseases Control and Prevention
CHUB	University Teaching Hospital of Butare
CHUK	University teaching Hospital of Kigali
CMHS	College of Medicine and Health Sciences
CPD	Continuing Professional Development
EAC	East African Community
EPT	Endemic and Pandemic Threats
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
HRH	Human Resources for Health
HPAI	Highly Pathogenic Avian Influenza
IDSR	Integrated Disease Surveillance Reporting
IEC	Information Education Communication
IHR	International Health Regulations
JEE	Joint External Evaluation
MINAGRI	Ministry of Agriculture and Animal Resources
MINEMA	Ministry in charge of Emergency Management
MoE	Ministry of Environment
NAP	National Action Plan
NRL	National Reference Laboratory
NST	National Strategy for Transformation
O.I.E.	World Organization for Animal Health
OH	One Health
OH-SMART	One Health Systems Mapping Analysis Resources Tool kit
OH-MCM	One Health Multi-sectoral Coordination Mechanism

OHSC	One Health Steering Committee
OHP	One Health Policy
PHEOC	Public Health Emergency Operations Centre
PVS	Performance of Veterinary Services
RAB	Rwanda Agricultural and Animal Resources Development Board
RBC	Rwanda Biomedical Center
RDB	Rwanda Development Board
REMA	Rwanda Environment Management Authority
ROH	Rwanda One Health
ROHSP	Rwanda One Health Strategic Plan
RVF	Rift Valley Fever
RwandaFDA	Rwanda Food and Drugs Authority
SARS	Severe Acute Respiratory Syndrome
SBCC	Social, Behavioral Change Communication
SDG	Sustainable Development Goals
SOP	Standard Operating Procedures
TWG	Technical Working Groups
UGHE	University of Global Health Equity
UNICEF	United Nations Children's Fund
UR	University of Rwanda
USAID	United States Agency for International Development
USD	United States Dollars
WHO	World Health Organization

# 1. INTRODUCTION

## 1.1. Rationale for the National One Health Policy

One Health is defined as a collaborative approach for strengthening systems to prevent, prepare, detect, respond to, and recover from primarily infectious diseases including zoonosis and other related public health issues such as antimicrobial resistance (AMR), that threaten human, animal, and environmental health collectively, using surveillance and reporting tools with an endpoint of improving global health security and achieving gains in development. While using infectious diseases including plant diseases, zoonosis and AMR as a starting point, it is recognized that this definition and the One Health approach have huge scope (e.g. with water and soil pollution that have animal and environment connections<sup>1</sup>).

The convergence of people, animals, and our environment has created a new dynamic in which the health of each group is inextricably interconnected<sup>2</sup>. The challenges associated with this dynamic are demanding, profound, and unprecedented. Of the 1,461 diseases now recognized in humans, approximately 60% are due to multi-host pathogens characterized by their movement across species lines.<sup>3</sup> Over the last three decades, approximately 75% of new emerging human infectious diseases originate from animals (zoonotic diseases).

Our increasing interdependence with animals and their products may well be the single most critical risk factor to our health and well-being with regard to infectious diseases. In the future, the animal-human interdependence shall be exacerbated by globalization, growth of human population, climate change, changes in land use, intensification of livestock production and other human behaviors.

The World Health Organization (WHO) defines health as the “state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”. This definition relates human health with the environment, linking human and animal health in such a way that their convergence entails benefits and risks for both. One manifestation of this relationship is the occurrence, presence and spread of emerging and re-emerging infectious pathogens<sup>4</sup>.

One of the greatest challenges facing us today is Antimicrobial Resistance (AMR). Antimicrobials usage in animals, humans and agriculture results in spreading of antimicrobial residues into aquatic and terrestrial environment. AMR affects not only human health but also other sectors such as animal health, agriculture, food security, water and sanitation and economic development. A study by Ntirenganya C. et al. conducted in 2015, showed that AMR rates are high in Rwanda and pose a

---

1 <http://documents.worldbank.org/curated/en/703711517234402168/pdf/123023-REVISED-PUBLIC-World-Bank-One-Health-Framework-2018.pdf>

2 [https://www.avma.org/KB/Resources/Reports/Documents/onehealth\\_final.pdf](https://www.avma.org/KB/Resources/Reports/Documents/onehealth_final.pdf)

3 National Academy of Sciences, Institute of Medicine. Microbial Threats to Health, Emergence Detection, and Response. 2003

4 [http://www.panaftosa.org/rimsa17/dmdocuments/RIMSAA17-Nota\\_Conceptual\\_english\\_\[010716\].pdf](http://www.panaftosa.org/rimsa17/dmdocuments/RIMSAA17-Nota_Conceptual_english_[010716].pdf)

serious therapeutic challenge to the management of common infections<sup>5</sup>. Ensuring the effectiveness of antimicrobials calls for a collaboration and coordination framework among sectors.

In the context of global environmental change, ecological and human dynamics are amplifying pressures at human-animal-environment interfaces, leading to increasing risks of disease emergence or re-emergence, spread of pathogen, and persistence compounding already high burdens in affected communities where endemic zoonotic pathogens infect billions of people, and cause upward of two million deaths annually.

Zoonotic diseases such as Avian Influenza, Rabies, Ebola, Rift Valley Fever (reported in the Eastern and Northern province of Rwanda in 2018)<sup>6</sup>, and most recent COVID-19 pandemic continue to have major impacts on health, livelihood and economy. Addressing zoonotic diseases requires a shared commitment and efforts among environmental, animal and human health sectors.

Plant or crops diseases enormously affect food security, and climate change may exacerbate negative impacts including threats to food safety. A study conducted in 2017 to assess the levels and factors for aflatoxin contamination in feed and ingredients in Rwanda showed that contamination commonly exceeded legal limits<sup>7</sup>. Aflatoxin in food and animal feedstuffs contaminate agriculture commodities and can cause sickness or death in humans and animals. The management of aflatoxin calls for institutional collaboration, coordination and communication among producers, handlers, regulators and consumers.

Achieving optimal health outcomes in the management of emerging and re-emerging infectious, zoonotic, vector-borne diseases, food-borne diseases, AMR and other public health issues requires a policy framework that recognizes the interconnection between people, animals, plants and their shared environment, this is One Health.

It is believed that implementation of One Health Policy will lead to:

- Improved animal and human health;
- Bringing together veterinary, health, plant pathologist, food safety, nutritionist, environmental, wildlife and public health professionals to collaborate and tackle public health challenges;
- Development of centers of excellence for education, research and training
- Promoting innovative programs to improve health and add to our scientific knowledge.

---

5 Cyprien Ntirenganya, Olivier Manzi, Claude Mambo Muvunyi and Onyema Ogbuagu; High Prevalence of Antimicrobial Resistance Among Common Bacterial Isolates in a Tertiary Healthcare Facility in Rwanda. *Am. J. Trop. Med. Hyg.*, 92(4), 2015, pp. 865–870 doi:10.4269/ajtmh.14-0607

6 Rwanda RVF Situation Report 18th May – 24 th July 2018

7 Kizito Nishimwe, Immaculate Wanjuki, Charles Karangwa, Ross Darnell, Jagger Harvey. An initial characterization of aflatoxin B1 contamination of maize sold in the principal retail markets of Kigali, Rwanda. *Food Control Journal* 73 (2017) 574e580

## 1.2. Alignment of One Health Policy and other policies and strategies

The development of the National One Health Policy is in line with the strategic country development policies and strategies and other international agendas as outlined below:

- **Sustainable Development Goals (SDGs):** The 17 SDGs have built on the successes of the preceding Millennium Development Goals. SDG2 and SDG3 are also relevant here where the former talks about “end hunger and achieve food security”. This implies, among other things, to continue fighting to control those diseases that drastically reduce livestock production parameters, such as foot-and-mouth disease. The latter talks about, “Ensuring healthy lives and promoting the well-being for all at all ages”, where 13 targets were established, most of them benefiting from the inter-sectoral approach of One Health.
- **EAC 2050 Vision:** One of its pillars is Agriculture, Food Security and Rural development that aims to enhance agricultural productivity for food security and a transformed rural economy;
- **Rwanda 2050 Vision:** This aspires to take Rwanda beyond high income to high living standards. Its income targets are to attain upper middle-income country status by 2035 and high-income status by 2050 with an objective of providing high-quality livelihoods and living standards. Its first pillar is dedicated to improving the quality of life of all Rwandans. Under this pillar it is clearly stated that one of the key objectives shall be ensuring sustained food security and nutrition for all households and age groups, universal, sustainable and reliable access to clean water (in houses) and sanitation as well as an environmentally friendly and climate resilient surroundings;
- **National Strategy for Transformation (NST1):** In the medium term, the NST/Seven Years Government Program (2017-2024) sets the priority for a green economy approach in its Economic Transformation pillar that promotes “Sustainable Management of Natural Resources and Environment to Transition Rwanda towards a Green Economy”. It also sets priority for malnutrition eradication and access to quality health for all in the social transformation pillar. Environment and climate change, are highlighted as cross-cutting areas of policy concerns;
- **National Health Policy:** aims to ensure universal accessibility (in geographical and financial terms) of equitable and affordable quality health services (preventative, curative, rehabilitative and promotional services) for all Rwandans. which focuses on equitable and affordable quality health services.
- **National Agriculture Policy:** focuses on food security, nutritional health and sustainable agriculture growth from a productive, green and market-led agriculture towards 2030 targets.
- **National Environment and Climate Change Policy** that focuses on a clean and healthy environment, resilient to climate variability and change
- **National Wildlife Policy:** focuses on maintaining wildlife resources in a healthy ecosystem.



## 1.3. Process to develop One Health Policy

The development of this One Health Policy, was an inclusive, participatory and consensus building process. It was developed under the leadership of the Ministry of Health (MOH) in collaboration with various stakeholders such as other Ministries, public agencies, academic institutions, development partners and civil society organizations. The process involved the following steps that were followed closely.

### 1.3.1. Review of relevant literatures

Several documents such as (ROHSP I, IHR reports, JEE reports, Rwanda PVS report 2014, ROH Situational Analysis report and One Health related workshop recordings, Rwanda HRH sustainability plan, the IDSR technical guidelines as well as the synthesis report on the identified workforce technical and cross-sectoral training gaps in Rwanda, Wildlife policy, Health sector policy, Agriculture policy, Sustainable Development Goals, 2050 vision, National Strategy for Transformation, Health Sector and Agricultural Sector Strategic Plans) were reviewed and analyzed closely to get a clear situation of One Health in Rwanda. From this, a draft zero of One Health Policy was developed

### 1.3.2. Stakeholder consultations

These were done in three ways; First, all stakeholders were invited to a workshop and draft 0 of the policy on One Health presented and they all gave comments/inputs that improved the draft. Secondly, individual or face to face consultations were carried out for the few who missed the stakeholders' workshop plus those who had questions during the workshop that needed a one to one discussion. Thirdly, more comments were solicited and received via email. From this consultations, draft 0 OHP was improved by incorporating all the comments/inputs and came up with draft 1 One Health Policy which was shared widely for further comments and inputs.

#### **The following were involved in the development process:**

- Ministries and Institutions: Ministry of Health, Ministry of Agriculture and Animal Resources, Ministry of Education, Ministry of Environment, Ministry in Charge of Emergency Management, Ministry of Finance and Economic Planning,
- Public Institutions: Rwanda Development Board, Rwanda Biomedical Centre, Rwanda Environment Management Authority, Rwanda National Police, Rwanda Food and Drugs Authority, Rwanda Agriculture and Animal Resources Development Board and Rwanda.
- Universities: University of Rwanda and University of Global Health Equity
- Hospitals: University Teaching Hospitals (CHUK, CHUB)
- Development partners: Food and Agriculture Organisation of the United Nations, World Health Organisation, United States Agency for International Development Rwanda country office, Centre for Diseases Control Rwanda country office, United Nations Children's Fund Rwanda, Rwanda Civil Society Platform, Sight and life foundation.

### **1.3.3. Preparation of One Health Policy**

Drafts of the OH policy were produced and discussed among key stakeholders in various technical meetings. Comments received from the stakeholders were used to enrich the policy and the final version was based on the comments. A technical validation meeting was organized to gather the final inputs and the document was submitted to the MOH leadership and other social clusters ministries for approval. A dissemination or launch of the policy is being planned as part of the final processes.

## 2. SITUATIONAL ANALYSIS

Rwanda embraced One Health in 2011 and many activities have been implemented under this framework up to date. A One Health Steering Committee (now called the One Health Multi-Sectoral Coordination Mechanism – OH-MCM) was set up to lead and advise on matters related to One Health. Through this mechanism, the first national One Health Strategic Plan (ROHSP 2014-2018) was developed and several joint activities like zoonotic disease prioritization including development of preparedness and response plans for three of the six priority zoonotic diseases i.e. RVF, HPAI and Rabies were carried out. Areas of multi-sectoral collaboration for zoonotic disease surveillance, outbreak investigation and control were identified. The One Health Steering Committee was assessed using the One Health Planning for Performance tool (OH-P4P) and actions to improve its efficiency identified and discussed.

Under the same mechanism, many other activities were conducted by the University of Rwanda (UR) through the One Health Central and Eastern Africa university Network. For example, a total of 528 final year undergraduate students from different disciplines and programs were trained in One Health. In addition, from 2015 to 2019, 204 students from different disciplines were involved in field practicum activities to harness hands-on learning experiences using a multi-disciplinary collaboration.

In parallel to field experiential learning, UR reviewed undergraduate and postgraduate curricula for veterinary, public health, environmental health sciences, nursing and nutrition in order to integrate OH modules and concepts. Faculty staff have also been trained on the use of new methodologies for teaching in and out of the classroom including problem-based learning, instructional design, experiential education and online learning. Since 2013 numerous activities have been implemented to strengthen students as future professionals (workforce), through the Students One Health Innovation Club that boasts over 700 graduate and undergraduate students.

It is also important to note that there are some cross-sectoral and institutional strengths that can be built on. This includes but is not limited to a) the presence of an electronic surveillance reporting system for both human and animal health, b) human and animal health systems that are well decentralized down to the community level, c) collaborative activities that exist within the human, environment and animal health experts mainly through the rapid response team and d) wildlife and agriculture and human health sectors, that have well-equipped laboratories to monitor and control risk of epidemics, though the human resource capacity still needs to be improved.

However, there were still many challenges especially related to governance, coordination and accountability that ultimately led to the failure to implement One Health in a proper multi-sectoral approach. On top of this, the delineation of tasks and mandates among public institutions makes for a segmented organization of work in which institutions operate independently of one another and from the perspective of their respective discipline or sector.

It was noticed that most of the documents were not specific about One Health gaps. It was also noted that most of the sectors share the same issues namely limited resources (both HR and financial) to carry out their activities. In a 2017 synthesis report on the identified workforce technical and cross-sectoral training gaps in Rwanda, the OH-SMART tool that was used showed that most of the discrepancies or needs are shared across sectors. To get a clear understanding of the challenges, gaps, opportunities and strength, all of these were categorized in line with prevention, response to and recovery from infectious and zoonotic diseases.

### **a) Detection and prevention of zoonotic diseases and other public health threats**

Several cross-sectoral gaps in preparedness and prevention of zoonotic diseases and other public health threats were identified and these include:

- Limited skills to apply for research grants (sector-specific and multi-sectoral) which ultimately limits the acquisition of funds to prepare well and prevent zoonotic diseases and other public health events.
- Minimal multidisciplinary formal training at university level for infectious disease management, which means that the graduating veterinary and medical professionals do not have the required skills to prevent or prepare for a potential threat.
- Among those in service, on-the field refresher training on biosafety is poor, leaving the different professional unprepared to detect in advance potential threats and prevent them.
- There are very few joint simulation exercises that bring together both human and animal health services which makes it difficult to prepare properly for prevention measures in a One Health spirit.
- Inefficient cross sectoral coordination and organization for priority zoonotic diseases in which institutional gaps in terms of detection and prevention of zoonotic diseases and other public health threats were found.
- Universities do not have enough programs that address OH training, resulting in a workforce unprepared to work in a One Health spirit when it comes to prevention and detection of zoonotic and other infectious diseases.
- Universities, MOH and MINAGRI have not carried out a comprehensive and long-term health workforce review, joint researches and projections so it is difficult to know the few One Health trained workforce that are on the market.
- Lack of a tested operational multi-sectoral communication plan that covers all phases of a pandemic (pre, during and post)
- Limited number of guidelines in place to limit transmission of zoonotic diseases made worse by silo thinking within institutions that prevents smooth multi-sectoral engagement.

## **b) Response and recovery from zoonotic diseases and other public health threats.**

- Regarding response and recovery from zoonotic diseases and other public health threats, there are several cross-sectoral gaps identified and these are;
- At University or college level (for example at the college of medicine and health sciences or college of agriculture and veterinary medicine, rarely do they carry out joint training on zoonotic disease testing and diagnosis. Thus means that most veterinary and medical professionals have poor knowledge of emerging or re-emerging infectious diseases which would make response to such events difficult for them.
- Future employers are not always involved in mentorship of future employees which makes it difficult for the latter to learn field skills in responding to infectious diseases. On top of this, there is a limited communication between government and the public sector and the university sector to understand the needs of employers.
- Shortage of laboratory staff with skills to diagnose zoonotic diseases e.g. avian influenza
- Limited regular communication and information sharing between animal and human health sectors makes it difficult to have an organized response or recovery if there was to be an outbreak such as Ebola.
- Financial and human resource constraints for diagnosis of zoonotic diseases is also a major setback to preparing field-worthy professionals who can respond to an emergency.
- Over dependence on donor-support means that some activities (especially those that are cross cutting) may not be done due to funder restrictions or lack of funds.
- Lack of joint reporting and surveillance protocols across human and animal (domestic, wildlife) sectors for most zoonoses.

### **In the same analysis, gaps related to institutional capacity were also found. These included but were not limited to:**

- Heavy workload at the National Reference Laboratory (NRL) because of limited capacity of the national satellite laboratories and also high demand of services from various clients which make it difficult to communicate results for a quick response.
- Limited fiscal space that ultimately affects staff preparedness and readiness to respond to emergency threats.
- Lack of diagnosis protocols for some priority zoonotic diseases

## 3. POLICY ORIENTATION

### 3.1. Vision

Human, Animal and Environment Health outcomes in Rwanda are optimized through multisectoral collaboration, coordination and communication.

### 3.2. Mission

To establish a collaboration, coordination and communication mechanism to ensure improvement of health and well-being outcomes of humans, animals and plants and to promote environmental resilience.

### 3.3. Values and guiding principles

The quality of current and future human and animal health and well-being depend on humanity's respectful, humble and responsible environmental stewardship. The fulfilment of this mission is based on values and guiding principles that orient improvement of health and well-being outcomes of humans, animals and plants.

The following are key guiding principles for the One Health Policy:

**a) Inclusiveness, Representativity and collaboration:** it shall harness synergies across diverse network by enabling conversations and foster respect and equity for every contribution regardless of the background. It shall consider a holistic interdependence and involve participation from all gender, social and cultural background and disability.

**b) Easy and accessible participation:** it shall encourage equal involvement by building capacity to enable contribution from all stakeholders

**c) Creativity and dynamism:** it shall offer novel and innovative resources or participation opportunities suitable for all sectors. It shall allow creativity from problem definition to context description, study design and implementation, from investigation and promotion of solutions and communication

### 3.4. Objectives

#### 3.4.1. Overall Objective

Enable environment for collaboration and coordination among human, animals (domestic, wildlife) and environment to achieving optimal health outcomes in the management of emerging and re-emerging infectious including plant diseases, zoonotic, vector-borne diseases, food-borne diseases AMR and other public health issues.

### 3.4.2 Specific Objectives

- a) Create an effective platform to enhance policy, institutional, operational coordination and collaboration amongst different relevant stakeholders
- b) Put in place a joint surveillance system to prevent, early detect, respond rapidly to and recover from zoonotic diseases, vector-borne diseases, food-borne diseases, AMR and other public health issues.
- c) Build and develop One Health workforce capacity in order to bridge the knowledge and skills deficits in detection, preventions and response to emerging and re-emerging infectious (plant, animal, human) diseases and other public health threats
- d) Promote applied research and innovations at the human-animal-environment interface to generate evidence that inform policy, guide interventions, legal and regulatory frameworks.
- e) Strengthen national awareness mechanisms for the general public around zoonotic diseases, vector-borne diseases, plant diseases, AMR and other public health issues.
- f) Ensure that there is a clear, systematic, predictable, sustainable and well-coordinated approach to mobilizing, acquiring, utilization, management, reporting, monitoring and evaluating domestic and external resources.

## 3.5. Policy Directions

### Policy Objective 1:

**Create an effective platform to enhance policy, institutional, operational coordination and collaboration amongst different relevant stakeholders.**

It is imperative to establish a framework to promote opportunities for multi-sectoral collaboration ensuring effective implementation of a One Health approach. This would bring together all sectors to map the activities of the various players and thus avoid the duplication of efforts/activities. In the event that there are no public health emergencies, effort should be spent on building networks to improve all aspects of One Health preparedness, response and recovery.

Under this framework, a well-coordinated platform on One Health is important for sharing information, creating synergy and networks that ultimately lead to better collaboration.

For the purpose of this policy, the OH platform shall be defined as a formalized, standing group that acts to strengthen and develop collaboration, communication, and coordination across the sectors responsible for addressing zoonotic diseases and other public health concerns at the human-animal-environment interface

The OH platform shall have a coordinating mechanism called the National OH Multi-sectoral Coordination Mechanism (OH-MCM) that shall assume the overall coordination and oversight regarding the implementation of this policy and subsequently related strategies.

The OH-MCM, shall advise the Prime Minister on all matters related to OH and shall be supported by technical working groups and a vibrant secretariat through which coordination of the sectors and all reporting would be channeled.

Through the OH-MCM, monitoring and evaluation (M&E) results of national strategies, programs, and activities for zoonotic diseases and other public health events will be done and information about what is working well and what can be done better shared.

### **Policy Objective 2:**

**Put in place a joint surveillance system to prevent, early detect, respond rapidly to and recover from zoonotic diseases, vector-borne diseases, food-borne disease, AMR and other public health issues.**

There is need to minimize the health, social and economic impact of zoonotic diseases and other public health threats. Lessons learned and best practices in event response and recovery shall be documented across sectors in the framework of a One Health approach emphasizing interoperability of plans and procedures as well as after action (post response) reviews.

Multi-sectoral preparedness and response plans to zoonotic diseases and food-borne diseases shall be strengthened through a comprehensive risk assessment, improving laboratory diagnostic capacities and joint surveillance activities at the animal-human interface. The recovery phase shall also be strengthened and actions to build resilience evaluated.

Plans for national capacity building for prevention and control of zoonotic diseases, food-borne diseases including building a robust scientific evidence-base for new approaches to control zoonotic diseases in the country shall be developed.

Mechanisms must be devised to detect the emergence of antimicrobial resistance and actions taken quickly to contain it. To avert this impending disaster, Rwanda shall develop a multi-sectoral National Action Plan (NAP) to tackle AMR. In this NAP, OH-MCM shall raise awareness and understanding on antimicrobial use, resistance prevention, and containment through effective communication and training, strengthen the knowledge and evidence on antimicrobial use and resistance through one-health surveillance and research, improve infection prevention and contain the spread of resistant microorganisms across plant, human and animal communities and health care settings through individual and environmental sanitation, hygiene, and infection prevention measures, optimize the use of antimicrobials in plant, human and animal health through effective stewardship practices, strengthen and establish national alliances and partnerships, management and governance arrangements, and resource mobilizations for the prevention and containment of AMR.



Basic and clinical research shall be reinforced and promoted to provide the fundamental knowledge necessary to develop appropriate prevention and control measures to antimicrobial resistance emerging and spreading in hospitals, communities, farms (crops, livestock), and the food supply chain.

Plans to develop national capacity in surveillance and monitoring processes for AMR including antimicrobial drug use, quality assurance and standardization of routine antimicrobial testing shall be prioritized

The occurrence of substandard and falsified drugs as well as contaminants in the food chain are identified problems worldwide including Rwanda. As such a national Drug and Food Safety Emergency Preparedness Plan shall be developed and a Drug and Food Safety Emergency Response Systems including traceability and product recall and disposal systems shall be established. Specifically, research on drug and food safety hazards shall be encouraged and supported by giving priority to research which aims to provide the necessary data to better manage drug and food safety hazards.

### **Policy Objective 3:**

#### **Build and develop One Health workforce capacity in order to bridge the knowledge and skills deficits in detection, preventions and response to emerging and re-emerging infectious diseases and other public health threats**

A consistent application of core competencies shall mitigate the issue of inconsistent skill sets in graduates across departments and schools. These competencies shall be reviewed and applied according to the level of mastery that is intended for students in specific academic programs. Integrated advanced training opportunities to mentor and develop future leaders in OH education, research and implementation shall be promoted and developed.

Professionals with a One Health mindset are essential to the institutionalization of OH and therefore in different pre-service curricula, One Health education with emphasis on zoonotic diseases, plant diseases, antimicrobial resistance, drug and food safety and communication will be promoted.

A harmonized approach to epidemiology capacity building program through in service applied epidemiology training tailored to the needs of the crops, animal, public and environment health sectors will be implemented

The knowledge and skills of crops pathologist, health professionals shall be updated regularly through continuing professional development (CPD) including modules on specific diseases, One Health, drugs and food safety and AMR.

Continuous upgrade of the skills and knowledge of health personnel shall be ensured through training and information exchange on disease surveillance and epidemic preparedness and by strengthening a system of management including coordination and networking.

**Policy Objective 4: Promote applied research and innovations at the human-animal-environment interface to generate evidence that inform policy, guide interventions, legal and regulatory frameworks.**

National capacity and skills in health research and support institutions with appropriate expertise and infrastructure in pursuing research for better understanding of dynamics of emerging and re-emerging infectious diseases shall be enhanced.

Measures to identify research priority areas that have a direct or indirect bearing upon the development and implementation of control strategies for emerging infectious diseases including plant or crops shall be instituted.

Sectors that have competence in specific areas e.g. environment, crops, veterinary sciences, molecular biology, societal and ecological factors influencing emerging infections shall be identified and engaged.

Evidence generated by research shall be used in formulating policy, influencing public and mass media coverage of the prevention and control of emerging diseases, as well as the public response to these diseases.

One Health workforce capacity to rapidly diagnose various emerging infectious diseases including plant or crops using modern molecular biological tools shall be developed. Encouraging and promoting local production of quality laboratory reagents as well as research for development of new diagnostic tools, vaccines and drugs to combat emerging infectious disease shall be fostered.

Encourage and promote modern computing and communication technologies for rapid transfer of data and information and for forecasting disease trends

Promote virological and genetics-based diagnostic services in both animal, environment and public health laboratories as well as novel and proper waste management for biohazards.

**2.3.4. Policy Objective 5: Strengthen national awareness mechanisms for the general public around zoonotic diseases, food-borne diseases, vector-borne diseases, AMR and other public health issues.**

Awareness seminars regarding food safety, food-borne diseases and One Health shall be carried out and the target shall be the decentralized decision makers in all sectors (animal, human, and environmental sectors). These shall be preceded by a baseline assessment on knowledge, attitude and practices on food safety and One Health among these leaders.

Food safety campaigns and the role of One Health shall be carried out through different strategies such as media adverts targeting consumers while farmers will be approached more directly by holding seminars or mass campaigns at the grass roots and specifically highlighting their role in plant, animal and public health.

Integrated plant and animal clinics shall be advocated for and supported. Agronomists and animal health extensions workers together with community health workers shall be given integrated lessons on food safety and One Health and supported in their efforts to work together.

The Drug and Food Safety Emergency Preparedness and Response Plans including products traceability, recall and disposal systems shall be reviewed and adapted to the level of local leaders and farmers for better awareness.

Policy Objective 6: Ensure that there is a clear, systematic, predictable, sustainable and well-coordinated approach to mobilizing, acquiring, utilization, management, reporting, monitoring and evaluating domestic and external resources

The OH MCM shall have a clear, coordinated approach to mobilizing, acquiring, utilization monitoring and managing of financial inflows and development cooperation support.

The financing for multisectoral, One Health activities shall rely on resources provided by international and local development partners and Government of Rwanda and allow partners and stakeholders willing to support activities within their own priorities working areas to finance One Health activities. One Health activities shall be funded through development partners' affiliations and division of labor.

The sources of financing for the activities in the Rwanda One Health Strategic Plan 2019-2024 will be provided by all multisectoral stakeholders and partners or external donors partners in One Health who are willing to support One Health initiatives focusing on One Health activities to address public health concerns of priority.

The One Health Multi-Sectoral Coordination Mechanism (OH-MCM) will lead and advise on matter related to One Health and will assume the overall coordination and oversight regarding the implementation of the Rwanda One Health activities. It will also ensure support, coordination, collaboration, and communication among sectors at the leadership level, and shall advocate for a multi-sectoral One Health approach to policy making, establishing strategies prioritizing, funding allocations and mobilizing resources for One Health activities.

The OH-MCM will have to communicate with key stakeholders, including policy makers in other areas, to increase awareness of the OH-MCM's role and engagement in its activities.

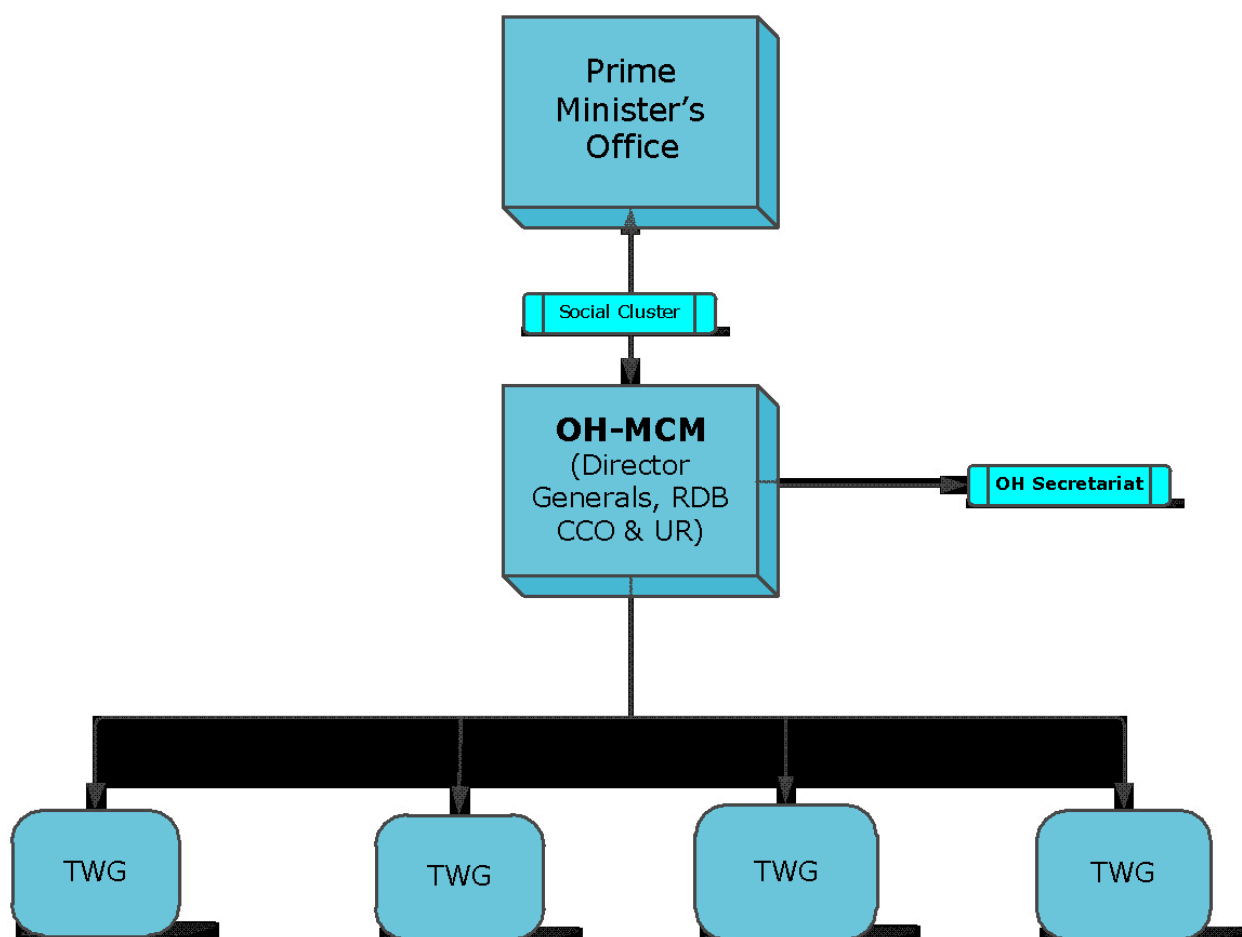
To ensure sustainable financing of One Health activities, it is critical to involve partners and stakeholders in planning process to ensure continuity of programmes and decrease risks of public health concerns in animals, human and environment happenings.

The OH MCM shall ensure strong and sustained commitment to good governance, effective communications, enhanced awareness and involvement of all key stakeholders by developing and executing a clear resource mobilization strategy agreed upon and owned by all key stakeholders.

## 4. Governance Framework

### 4.1. Governance and Accountability

A governance framework with a focus on leadership and technical coordination functions shall be set up to provide OH stakeholders guidance on how best to work together. This framework in the shape of a coordination mechanism (as seen in Fig 1 below), shall be set up by Prime Minister's Instructions to strengthen synergies and ensure an optimum participation of all key actors and effective implementation and utilization of the available resources (human, information, logistics and finance) and shall have two major structural layers that are complementary and equally important in ensuring alignment among sectors.



**Fig 1: Proposed OH Multi-sectoral Coordinating Mechanism for Rwanda**

The coordination aspects shall be agreed among members of the OH-MCM as soon as it is established. Leadership of the OH-MCM shall rest in the Ministry in charge of Health. Basic working arrangements shall include roles and responsibilities of the members (see below)

#### **4.1.1. One Health Multi-sectoral Coordination Mechanism (OH-MCM)**

This shall be the inter-ministerial leadership and coordination level. Its main function shall be support, coordination, collaboration, and communication among sectors at the leadership level, and shall advocate for a multi-sectoral One Health approach to policy making, strategic planning, fundraising and resource allocation.

A Prime Minister's Instructions establishing One Health Multi-Sectoral Coordination Mechanism and determining its mission, organisation, competence and functioning shall be developed. The OH-MCM shall report and advise the Prime Minister bi-annually or more times depending on need to inform or advice government on special issues.

The OH-MCM shall also have technical coordination responsibilities where it shall support and coordinate technical activities to ensure that a multi-sectoral One Health approach is taken and that there is alignment across existing governmental structures and across the technical activities addressing zoonotic diseases, plant/crops diseases, AMR, drugs and food safety hazards and other public health threats.

#### **4.1.2. Technical Working Groups (TWGs)**

These shall be expert forums that provide technical expertise for tackling specific issues (such as zoonotic diseases, plant/crops diseases, AMR, drugs and food safety hazards and other public health threats), enhance mutual accountability and collaboration among the sectors and promote greater efficiencies in the management of those identified issues using a OH approach in the country.

The following shall be key areas of focus for technical working groups (although others may be chosen by the OH-MCM): a) Food, crops/planDrugs Safety and AMR, b) Disease Control, Surveillance, Preparedness, Response and recovery, c) Environment & Disaster Management and d) One Health Workforce Development, Research & Knowledge Management. Technical aspects of program implementation shall be fully integrated into the appropriate operating units of key implementing partners through their sector specific policies and action plans. The number of TWGs and their specific terms of reference shall be determined by the OH-MCM.

**OH secretariat** shall be set up to assist the OH-MCM with the mandate to monitor on regular basis all the activities carried out under the OH approach and shall be hosted by the lead ministry i.e. the Ministry of Health The OH Secretariat shall also be responsible for fiduciary aspects and for preparing quarterly and annual consolidated technical and financial reports that shall be submitted to the OH-MCM for review and approval.

### **4.1.3. Partnership and Stewardship**

Inter-institutional collaboration including public private partnerships shall be encouraged at local, regional and international levels to ensure collaboration with private sector, communities, civil society organizations, professional associations, academic institutions, farmers associations, development partners etc. A coordination framework showing the reporting mechanism and accountability shall be clarified in the OH strategies and well followed.

On top of the sector specific responsibilities below, each institution will:

1. provide representation to the OH-MCM,
2. provide professional expertise and technical managers to participate in the OH national technical working groups, and support the institutionalization process of OH platform in the country,
3. participate in the mobilization of resources for surveillance, detection, prevention control and elimination of zoonotic diseases, AMR and other public health threats as well as development and dissemination of risk communication materials in the country,
4. advise and participate in investigation and control of zoonotic diseases and other public health threats as required by other parties and last but not least,
5. conduct joint research and share findings with other parties

### **Ministry in charge of Health**

The Ministry in charge of Health shall have the following obligations:

1. Assign leadership for the platform by appointing (in consultation with other sectors) the OH-MCM Chairperson.
2. Advise and participate in the investigation and control of zoonotic diseases in humans, AMR problems and other drugs and food safety issues in collaboration with others.
3. Provide information on areas prone to particular zoonotic diseases in humans.
4. Issue public statements concerning human health jointly with other parties when required
5. Provide a physical space with capabilities for coordinating elements of outbreak response- also known as Public Health Emergency Operations Centre (PHEOC).

### **Ministry in charge of Agriculture and Animal Resources**

The Ministry in charge of Agriculture and Animal Resources shall have the following obligations:

1. Advise and participate in the investigation and control of zoonotic diseases in animals, AMR problems drugs, crops/plant diseases and food safety issues in collaboration with other parties.
2. Avail relevant data on animal diseases and species affected in the country whenever it is required

by other parties and facilitate joint information sharing mechanisms.

3. Provide regular information and risk maps on disease epidemiology indicating areas prone to particular zoonotic diseases in animals (domestic, wildlife)
4. Issue public statements concerning status of animal health or jointly with other parties when required.

### **Ministry in charge of the Environment**

The Ministry in charge of the Environment shall have the following obligations:

1. Provide information about ecosystems and habitats that provide critical ecosystem services in order to guide interventions during management of diseases that emanates from interaction at animal (domestic, wildlife), human and environment interfaces.
2. Advice on human activities on the environment that are likely to increase exposure and incidence of zoonotic diseases and other health threats such as proper and safe carcass disposal and waste management.
3. Jointly provide statements on issues of environmental management and zoonotic diseases
4. Provide information on climate-related disasters aimed at guiding management of zoonotic diseases and food safety issues.
5. Provide information on the quality of water supply from various sources including ground water (wells and spring) and surface water (rivers, lakes and ponds) relevant to management of zoonotic diseases.
6. Disseminate environment-related information that can be used to predict and prevent zoonotic diseases in collaboration with other parties

### **Ministry in charge of Education**

The Ministry in charge of Education shall have the following obligations:

1. Ensure training of pre-service and in-service personnel in OH and ensure OH competencies are integrated in various curriculum in universities
2. Encourage multi-disciplinary OH student clubs
3. Ensure research and innovation in the OH field are promoted and evidence are shared with stakeholders to inform policy and decision making processes

### **Ministry in charge of Finance and Economic Planning**

The Ministry in charge of Finance and Economic planning shall coordinate the mobilization of internal and external resources.

### **Ministry in charge of ICT and Innovation**

The Ministry in charge of ICT and Innovation shall coordinate the development and use of information technology in the implementation of One Health Policy.

### **Rwanda Development Board**

The Rwanda Development Board shall have the following obligations:

1. Avail data on wildlife diseases and species at risk or affected wildlife protected areas in the country whenever it is required by other parties
2. Advise and participate in investigation and control of zoonotic diseases in wildlife.
3. Monitor available global information networks of wildlife diseases

## **4.2. Monitoring and Evaluation**

This policy oversees the establishment and effective functioning operational collaboration and coordination of the OH platform. This shall be done in the following way:

- a) Provide the mechanisms for monitoring, reviewing, and evaluating progress towards the realization of One Health.
- b) The implementation of this policy shall be evaluated against the performance indicators found in national OH Strategic Plan. A comprehensive and detailed annual action plan shall be developed from the One Health strategic plan and from which a monitoring mechanism shall be established.
- c) The main sources of data for monitoring, review and evaluation of the policy shall be from progress reports from the different stakeholders.
- d) Evaluation of the policy shall serve two main purposes; first, to enquire into the feasibility of the policy and second, to assess the overall impact.
- e) Evaluation of the policy shall help the OH-MCM to continue with the plan that is likely to produce the intended results and lastly, it shall detect and correct some of the factors that may reduce the positive impact of One Health.
- f) This is a living document and shall be reviewed and updated at the discretion of the OH-MCM.
- g)



## REFERENCES

1. 7 Years Government Program: National Strategy for Transformation (NST 1)2017 - 2024 [http://www.minecofin.gov.rw/fileadmin/user\\_upload/NST1\\_7YGP\\_Final.pdf](http://www.minecofin.gov.rw/fileadmin/user_upload/NST1_7YGP_Final.pdf)
2. Cyprien Ntirenganya, Olivier Manzi, Claude Mambo Muvunyi and Onyema Ogbuagu; High Prevalence of Antimicrobial Resistance Among Common Bacterial Isolates in a Tertiary Healthcare Facility in Rwanda. *Am. J. Trop. Med. Hyg.*, 92(4), 2015, pp. 865-870 doi:10.4269/ajtmh.14-0607
3. [http://www.panaftosa.org/rimsa17/dmdocuments/RIMSA17-Nota\\_Conceptual\\_english\\_\[010716\].pdf](http://www.panaftosa.org/rimsa17/dmdocuments/RIMSA17-Nota_Conceptual_english_[010716].pdf)
4. [https://www.avma.org/KB/Resources/Reports/Documents/onehealth\\_final.pdf](https://www.avma.org/KB/Resources/Reports/Documents/onehealth_final.pdf)
5. Kizito Nishimwe, Immaculate Wanjuki, Charles Karangwa, Ross Darnell, Jagger Harvey. An initial characterization of aflatoxin B1 contamination of maize sold in the principal retail markets of Kigali, Rwanda. *Food Control Journal* 73 (2017) 574e580
6. National Academy of Sciences, Institute of Medicine. *Microbial Threats to Health, Emergence Detection, and Response*. 2003. <https://www.ncbi.nlm.nih.gov/books/NBK221486/>
7. National Agriculture Sector Policy. 2017. <http://extwprlegs1.fao.org/docs/pdf/rwa174291.pdf>
8. National Environment and Climate Change Policy 2019. <http://www.fonerwa.org/sites/default/files/Rwanda%20National%20Environment%20and%20Climate%20Change%20Policy%202019.pdf>
9. National Health Sector Policy. 2015. [http://www.moh.gov.rw/fileadmin/templates/policies/Health\\_Sector\\_Policy\\_\\_\\_19th\\_January\\_2015.pdf](http://www.moh.gov.rw/fileadmin/templates/policies/Health_Sector_Policy___19th_January_2015.pdf)
10. REVISED-PUBLIC-World-Bank-One-Health-Framework-2018.pdf <http://documents.worldbank.org/curated/en/703711517234402168/pdf/123023->
11. Rwanda RVF Situation Report 18th May - 24 th July 2018
12. Rwanda Wildlife Policy. 2013. [http://www.minicom.gov.rw/fileadmin/minicom\\_publications/policies/Wildlife\\_policy.pdf#targetText=The%20Rwanda%20Wildlife%20Policy%20is,arching%20philosophical%20framework%3A%20Recognising%20that%3A&targetText=Wise%20Utilisation%20of%20wildlife%20resources,a%20sustainable%20and%20equitable%20development.](http://www.minicom.gov.rw/fileadmin/minicom_publications/policies/Wildlife_policy.pdf#targetText=The%20Rwanda%20Wildlife%20Policy%20is,arching%20philosophical%20framework%3A%20Recognising%20that%3A&targetText=Wise%20Utilisation%20of%20wildlife%20resources,a%20sustainable%20and%20equitable%20development.)
13. Sustainable Development Goals <https://www.undp.org/content/undp/en/home/sustainable-development-goals.html>

[www.moh.gov.rw](http://www.moh.gov.rw)

