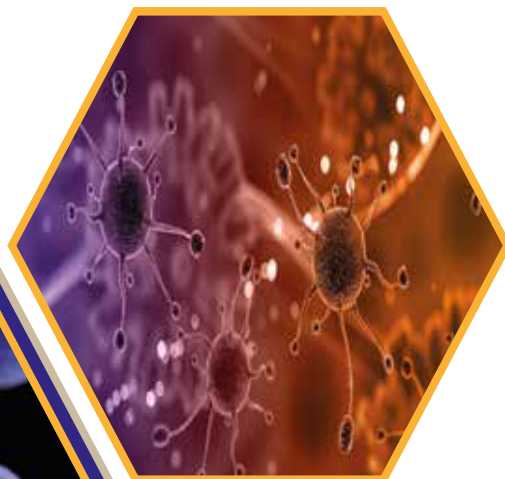




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SOLOMON ISLANDS MULTISECTORAL NATIONAL ACTION PLAN ON ANTIMICROBIAL RESISTANCE 2023 - 2026

Version 05th April 2024



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ACRONYM

AMC	Antimicrobial Consumption
AMC/WPRACSS	Antimicrobial Consumption/ (WPRACSS).
AMR	Antimicrobial Resistance
AMSC	Antimicrobial Stewardship Committee
AMU	Antimicrobial Use
AST	Antibiotic Sensitivity Testing
CSA	Country Situation Analysis
CSO	Civil Society Organisation
DPS	Division of Pacific Technical Support
GAP	Global Action Plan
GDP	Gross Domestic Product
GLASS	Global Antimicrobial Resistance and Use Surveillance System
EMS	Essential Medicines
EML	Essential Medicines List
ESBL	Extended Spectrum Beta-Lactamases
EUCAST	European Committee on Antibiotic Sensitivity Testing
FAO	Food and Agricultural Organization of the United Nations
HH	Hand Hygiene
HIS	Health Information System
IPC	Infection Prevention and Control
LQMS	Laboratory Quality Management Systems
M&E	Monitoring and Evaluation
MAL	Ministry of Agriculture and Livestock
MFMR	Ministry of Fisheries and Marine Resources
MHMS	Ministry of Health and Medical Services
MoEnv	Ministry of Environment, Climate Change and Disaster Management and Meteorology
MOU	Memorandum of Understanding
MRSA	Methicillin Resistant <i>Staphylococcus aureus</i>
NAMRSC	National AMR Stewardship Committee
NAP	National Action Plan
NDP	National Division of Pharmacy
NGO	Non-Governmental Organization
NHSP	National Health Strategic Plan
NMP	National Medicines Policy
NMS	National Medical Store
NMTC	National Medicines and Therapeutics Committee
NPD	National Pharmacy Division
NPHL	National Public Health Laboratory

NRH	National Referral Hospital
PIC	Pacific Island Countries
QA	Quality Assurance
RDP	Role Delineation Policy
SDG	Sustainable Development Goals
SIG	Solomon Islands Government
SINU	Solomon Islands National University
SLMS	Second Level Medical Store
STG	Standard Treatment Guideline
TA	Technical Assistance
UHC	Universal Health Coverage
UNEP	United Nations Environment Programme
WAAW	World AMR Awareness Week
WASH	Water, sanitation and hygiene
WHO	World Health Organization
WOAH	World Organisation for Animal Health
WPRACSS	Western Pacific Regional Antimicrobial Consumption Surveillance System
WPRO	WHO Office for the Western Pacific

Foreword

This Plan lays the foundation for adopting good collaboration to address the effects of antimicrobial resistance (AMR) on humans, animals and the impact on our environment in Solomon Islands. The Solomon Islands Government through the Ministry of Health and Medical Services (MHMS) is currently addressing AMR as one of the priority agendas in the new National Strategic Health Plan 2023 -2026. We will adopt the One Health Approach to combat and contain AMR in our island home. This is more critical than ever now with the global fight against the Covid19 pandemic and other emerging diseases.

The Global Action Plan (GAP) on Antimicrobial Resistance was endorsed at the Sixty-eighth session of the World Health Assembly, where Member States were urged to develop National Action Plans on AMR. AMR has been raised as a serious issue within the Solomon Islands with high level awareness at the MHMS.

AMR is a growing and serious public health threat that will have major impact on the gains achieved in medical sciences over the years and adversely affect attainment of our mandated targets under the Sustainable Development Goals (SDGs). The rapid emergence and spread of AMR infections is aided by the widespread and inappropriate use of antimicrobials in human and veterinary medicine and in the agriculture industry. These are further compounded by the delivery of ad hoc infection prevention and control programs, poor knowledge of antimicrobials in our communities, low immunization coverage, supply instability of poor-quality medicines to provinces and un-regulated approach on the use of antimicrobials.

Responding to the call from the MHMS, the Antimicrobial Stewardship Committee (AMSC) was appointed in 2015 and consisted only of health professionals from the National Reference Hospital. The Committee will now evolve into a responsive “One Health Approach” governance structure including the tripartite partnership and affiliated Solomon Islands Government (SIG) ministries, Consumer Council, non-governmental organizations and private sector representatives. With our Ministry as lead, the AMSC is appointed to implement and monitor strategic activities to help prevent, control and minimize the impact of AMR in Solomon Islands.

I would like to acknowledge the continuing support from the World Health Organization (WHO) and other development partners to fight against Antimicrobial Resistance in our lifetime and setting the scene for our future tripartite partnership leaders to follow.

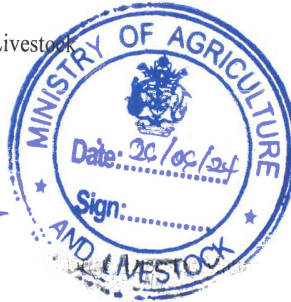
Once again, our government is fully committed to lead in combating and containing AMR in our beautiful island home. We must work as one. There is no time to wait. Stewards for the future and secure from the ravages of this silent tsunami.

I wish our team and stakeholders all the success in implementing the inaugural National Multi-sectoral Plan on Antimicrobial Resistance.

Minister of Health and Medical Services
Hon. Dr Paul Popora Bosawai



Minister of Agriculture and Livestock
Hon. Franklyn Derek Wasi



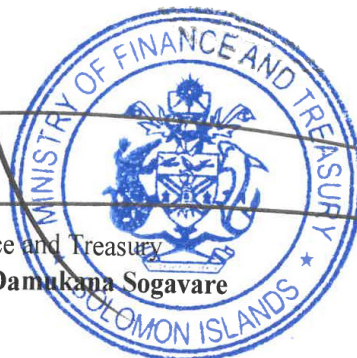
Minister of Environment, Climate Change, Disaster Management and Meteorology
Hon. Trevour Hedley Magaha



Minister of Fisheries and Marine Resources
Hon. Nestor Ghiri



Minister of Finance and Treasury
Hon. Manasseh Damukana Sogavare



Acknowledgement

Thanks to the relevant stakeholders from other Ministries who commented and gave invaluable assistance on the various drafts of the Solomon Islands National Action Plan on Antimicrobial Resistance 2023-2026 and their support is gratefully acknowledged.

Thanks also to all participants from various unit/departments within the Ministry of Health who attended the AMR Consultation Workshops 2019. This action plan derived from presentations and interactive discussions during the workshop.

Finally, thanks to the WHO for its technical and financial support to develop the Solomon Islands National Action Plan on Antimicrobial Resistance 2023-2026.

3.0 Introduction

Antimicrobial resistance (AMR) jeopardizes universal health coverage (UHC) and progress on many Sustainable Development Goals (SDGs), including those on poverty, health and well-being, inequality and, work and economic growth. An estimated 1.27 million deaths occurred globally due to AMR in 2019.¹ AMR is predicted to reduce global gross domestic product (GDP) by 3% by 2030, adding an extra US\$ 700 billion to healthcare costs in 2030 and affecting low-income countries more adversely. In the Western Pacific Region where Solomon Islands are located, between 2020 and 2030, 5.2 million AMR-related deaths and an excess cost of 148 billion USD are projected.² It is worth noting that the regional AMR-related mortality rate is similar to rates for kidney diseases, diabetes mellitus, liver cirrhosis, and breast cancer, and it is considerably higher than rates for tuberculosis and HIV/AIDS.^{1,3} AMR is a silent pandemic that threatens maternal, child, and reproductive health, infectious disease management, cancer therapy, surgical interventions, and health security.

The Solomon Islands is located in the Melanesian sub-region of the South Pacific Ocean and is an archipelago nation consisting of close to 1000 islands. The country currently ranks 143 on the Human Development Index and is classified as lower middle income in the region. The population of the Solomon Islands is about 612, 000 and is estimated to exceed 900, 000 in 2035.

The previous National Health Strategic Plan (NHSP) is under review to formulate focused and enhanced services for 2023 to 2026.⁴ Ministry of Health and Medical Services (MHMS) has taken steps to prioritise key aspects of the One Health approach under all the four key result areas of the previous NHSP with actions directly linked to fostering partnerships in the “Health Islands Policy;” prioritised top six programs of the One Health Approach including immunisation, Water Sanitation and Hygiene (WASH), Malaria and TB Control; establish the AMSC, Antibiotic standard treatment guidelines (STG) freely available on mobile phone application; core and proxy SDG related indicators that helped to measure objectives of the NHSP. There is still a lack of antimicrobial consumption (AMC) data and government regulation restricting antimicrobial use in animals. Like other Pacific Island Countries (PICs), Solomon Islands is yet to participate in the regional AMC/ Western Pacific Regional Antimicrobial Consumption Surveillance System (WPRACSS) and Global Antimicrobial Resistance and Use Surveillance System (GLASS) reporting systems.

Solomon Islands face challenges when it comes to combatting AMR. We are prone to natural disasters and disease outbreaks, exacerbated by the effects of global climate change. We must press on, continue strengthening of operational, structural, and technical capacities in the tripartite partnership ministries. Prioritising investments in improving regulatory frameworks; good governance structures; develop workforce capacities; strengthen surveillance systems to collect good AMR intelligence for country-specific research and interventions; improve Infection Prevention and Control (IPC) and

¹ [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)30925-9/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30925-9/fulltext) Vos T, Lim SS, Abbafati C, Abbas KM, Abbasi M, Abbasifard M, et al. Global burden of 369 diseases and injuries in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019. *The Lancet*. 2020 Oct 17;396(10258):1204–22

² World Health Organization, Manila (2023) Health and Economic Impacts of Antimicrobial Resistance in the Western Pacific Region 2020–2030 <https://www.who.int/publications/i/item/9789290620112>

³ <https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death> World Health Organization. Global Health Estimates 2020: Deaths by Cause, Age, Sex, by Country and by Region, 2000–2019. Geneva: World Health Organization

⁴ <https://solomons.gov.sb/review-of-the-national-health-strategic-plan-2016-2020-in-progress/>

WASH in all facilities and communities, sound antimicrobial stewardship; monitor and evaluate using NHSP and globally recommended indicators with a One Health Approach. In the next strategic years, working as one in a joint tripartite partnership to advocate for funding, planning, implementing and monitoring using core outcome indicators or proposed additional indicators are essential keys to achieving incremental positive outcomes.

Solomon Islands' Government is fully committed to working with WHO, Food and Agricultural Organization of the United Nations (FAO), World Organisation for Animal Health (WOAH), United Nations Environment Programme (UNEP) and other donors and our communities in decreasing the burden and effects of infectious diseases is the ultimate objective that can also facilitate progress towards the AMR GAP and SDG sensitive indicators.⁵

4. Collaborative Approach in developing the Plan

Responding to the Ministry of Health and Medical Services commitments at the WHO Regional Committee for the Western Pacific in 2014 and subsequent re-commitment at the World Health Assembly in 2015, a technical assistance was commissioned in 2017. The report recommended strengthening key areas to help in containing AMR and is aligned to the five 2015 WHO Global Action Plan strategic objectives.

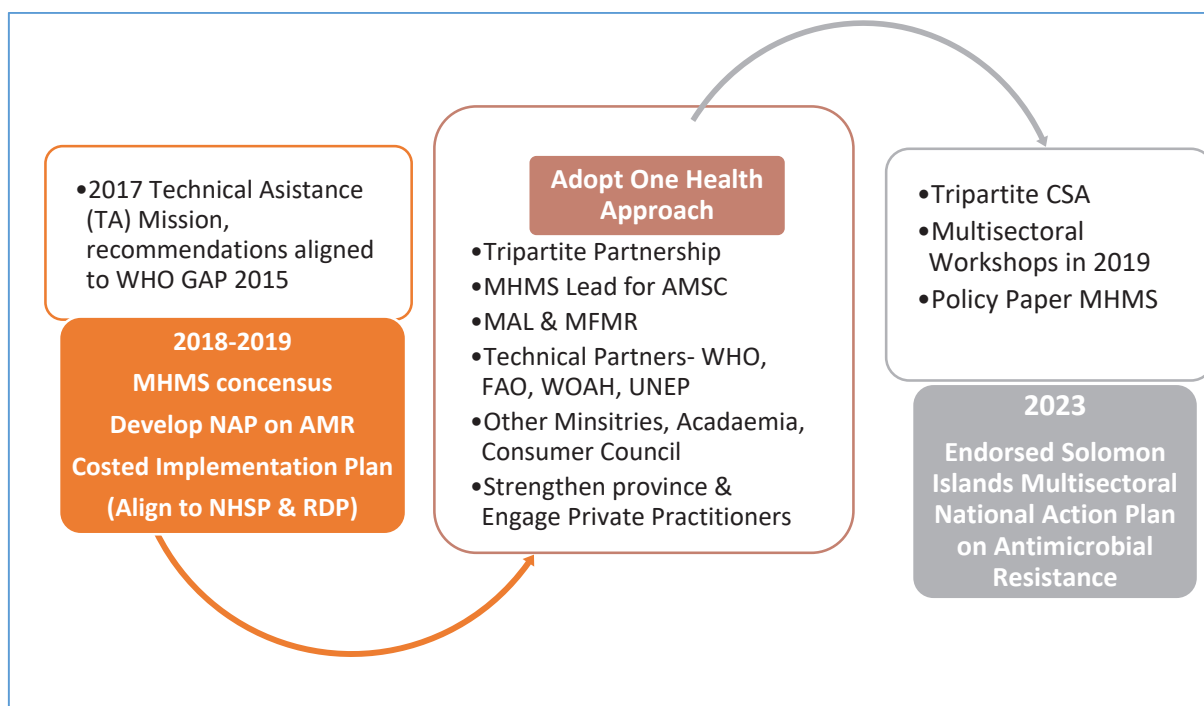
- National Mechanism to Coordinate Antimicrobial Resistance Containment Strategy
- Surveillance and Laboratory Capacity
- Medicinal Policy and Regulatory Affairs including quality control
- Procurement and Supply Chain Management
- Awareness and Understanding of Antimicrobial Resistance
- Promoting rational use of medicines in Humans and Animal Husbandry
- Infection Prevention and Control

The Tripartite of MHMS, Ministry of Agriculture and Livestock (MAL) and Ministry of Fisheries and Marine Resources (NFMR) completed the Country Situation Analysis (CSA) in 2019. MHMS leadership agree to lead and adopt the “One-Health Approach” in developing the Solomon Islands National Action Plan on AMR and the implementation Plan. The national action plan (NAP) is aligned to the NHSP and Role Delineation Policy (RDP). Results from the CSA was used to synthesise the NAP. A multi-stakeholder workshop was also conducted in 2019.

The CSA findings was presented at the workshop to discuss and recommend country's response by – Setting the Strategic Intent of the NAP; Establishing a governance structure; and formulate country specific activities from the CSA findings to strengthen capacities/systems under the five strategic objectives. Technical support from development partners such as WHO, FAO and WOAH also helped formulate the NAP. In December 2019 a draft was circulated to the appointed Technical Working Group providing AMR stewardship on prevention and control for comments before being endorsed as a Policy Paper at the MHMS, as in **Figure 1**.

Figure 1 – Diagram of Collaborative Approach

⁵ [Who.int/publications/i/item/monitoring-and-evalutaion-of-the-global-action-plan-on-antimicrobial-resistance](https://www.who.int/publications/i/item/monitoring-and-evalutaion-of-the-global-action-plan-on-antimicrobial-resistance)



5.0 Summary of brief Situational Analysis on AMR

Solomon Islands (SI) legal framework is in place but needs updating to link human health to animal health and environmental health. The three Principal Pharmacy Acts⁶ contain provisions that mandate the control and ratify penalties for importation, prescribing, and sale of medicines such as Antimicrobials under schedule A. These Acts need updating or regulations gazetted urgently to respond to current situations such as AMR and Covid19 pandemic. The 2015 updated National Medicines Policy is yet to be reviewed and endorsed by the MHMS. The 2017 Essential Medicines List is due for revision. The National Medicines & Therapeutics Committee (NMTC) endorsed the Antibiotic STG in 2015 is widely available on mobile app. To set the wheels in motion, MHMS commissioned the NRH to set up the AMSC in 2015 and will be reporting to the established NMTC.

The National Pharmacy Division (NPD) performs basic Regulatory Authority and Essential Medicines (EMS) functions that need operational, structural and systems strengthening. There is no system in place to register medicines prior to its importation into SI. WHO is supporting a mini-lab to test quality of selected EMS on how to use the Mini Lab Kits for local Pharmacists; NPD reports Quality Assurance (QA) issues on the *MedQuality Assurance* website and can access the sub-regional platform that is shared with other PICs. The National Medical Stores (NMS) procures EMS and other pharmaceuticals from pre-qualified suppliers with good performance records. They are required to submit evidence of Quality Assured products. National Reference Hospital (NRH) currently use *msupply*, it has potential for use in the wider health system. There is the urgent need to strengthen Health Information System (HIS) capacities, to better quantify EMS stock using credible epidemiological and logistics data. NMS's inability to bump up stock at provincial second level medical stores results in frequent EMS stock outs

⁶ Pharmacy and Poisons Act 1941, Pharmacy Practitioners Act 1997, Dangerous Drugs Act 1996.

in provincial health facilities.⁷ NPD and NRH have conducted ad hoc antimicrobial stewardship activities since 2015 with limited private retailers' involvement. Hype is observed in the build up to the annual November World Antimicrobial Awareness Week (WAAW) with no further follow-on activities. In 2019, WHO Regional Office for the Western Pacific (WPRO) invited MHMS to participate in the Western Pacific Regional Antimicrobial Consumption Surveillance System (WPRACSS).

NRH is considered the National Reference Laboratory in Solomon Islands. Since 2015, NRH laboratory performs Antibiotic Sensitivity Testing (AST), using European Committee on Antibiotic Sensitivity Testing (EUCAST) guidelines and the Kirby-Bauer disc diffusion method. Quality control testing has not been performed on a regular basis due to lack of control organisms. The laboratory has ordered quality control tests and plan to conduct regular quality control testing. Both the NRH and the National Public Health Laboratory (NPHL) need to coordinate and share resources and information. The NPHL has a well-equipped laboratory and would like to assist the NRH in future. NPHL works closely with Environmental health department to test water, food and soil samples. Currently the public health laboratory cannot test for antibiotic residue in any of their samples. In this current Covid-19 pandemic climate, implementation of Laboratory Quality Management Systems (LQMS) is urgently required including regular external quality programmes, improving laboratory facilities, procurements and supply chain management capacity, and adopt data management software such as WHONET.

Like many PICs, there is absence of formal surveillance systems resulting in limited data on AMR, AMC and Antimicrobial Use (AMU) in Solomon Islands.

An initiative with Royal Brisbane Hospital in 2017, conducted a series of microbiology studies using EUCAST guidelines at NRH, were positive for *Staphylococcus aureus* and further tested for methicillin resistant *Staphylococcus aureus* (MRSA). It was found that the prevalence of MRSA was 2%. No multi-drug resistant MRSA was detected.

In another study, samples were tested positive for gram negative bacteria and further analysed for extended spectrum beta-lactamases (ESBL) bacteria. The prevalence of ESBL was 15%, but no confirmatory testing performed, so results were interpreted with caution. Key informant interviews indicate some MRSA and ESBL infections have been observed in NRH.

A retrospective analysis⁸ of AMR data of the NRH Medical Laboratory of Solomon Islands for the years 2021 and 2022, reported that NRH has processed 3,864 samples of 2,807 patients (male 62.1%, female 37.9%). Most isolates were from in-patients (68%). The commonest organisms reported were *Staphylococcus aureus* (19%), *Pseudomonas aeruginosa* (12.5%), *Escherichia coli* (8.7%), and *Klebsiella pneumoniae* (8.4%). Some isolates with important drug-resistant profiles reported included Enterobacteriaceae which are non-susceptible to carbapenems (n=3), Salmonella species which are non-susceptible to third-generation cephalosporin (n=1), ESBL-producing Enterobacteriaceae (n=72), and MRSA (n=123). Even though the AMR data available for analysis from the Solomon Islands is limited, the data above from the NRH laboratory confirms that antimicrobial-resistant pathogens in the WHO's 'high and medium priority categories' are already present in the Solomon Islands. This calls

⁷ NHSP 2016-2020 - 98% of essential medicines are in stock at the National Store but significantly less at Provincial level

⁸ CAPTURA project report 2023 (CAPTURA: Capturing data on Antimicrobial Resistance Patterns and Trends in Use in Regions of Asia); a regional Fleming Fund project by a consortium led by the International Vaccine Institute (IVI)

for an urgent intervention to strengthen AMR surveillance and laboratory capacity for early detection and intervention for such pathogens, and also to stop mis-use and over-use of antibiotics to avert the impact of AMR in the future.

The outpatient department's registry data of three health facilities showed that the majority of outpatients are prescribed antibiotics: 61% of outpatients at Mbokona, 47% of outpatients at Samaritan, and 59% of outpatients at Rove. These data might indicate over-prescription of antibiotics among outpatients and a need to strengthen antimicrobial stewardship to reduce mis-use and over-use of antibiotics.

The draft 2019 Infection Prevention and Control IPC policy guidelines needs to be revised and endorsed. The 2008 Antiseptics and Disinfectants guidelines was revised and published in 2022. Resource constraints has hampered the implementation of these guidelines. Wins were seen in IPC, including hand hygiene (HH) and WASH during the Covid19 pandemic. Increased health executive support and influencers can further highlight the importance of these measures in public and private service provider facilities including aquaculture, animal husbandry and food sellers. Improving access to quality water and promote personal hygiene awareness can reduce infections in communities.

NPHL has a close relationship with Environmental Health. A survey on water quality testing at selected health care facilities in 2018 revealed contamination with *Escherichia coli*. Results from a 2019 water quality survey covering all health facilities in Solomon Islands is pending.

Like for the human health sector, new regulations to control and contain AMR in agriculture and environment sectors needs urgent attention. There is limited interaction and exchange of information with other tripartite ministries. Although there is evidence of antibiotic usage in these other sectors, data is very limited. Currently no antibiotics are routinely being used for aquaculture or in fish feed. The Ministry of Fisheries assist farmers with fish farming practices and techniques.

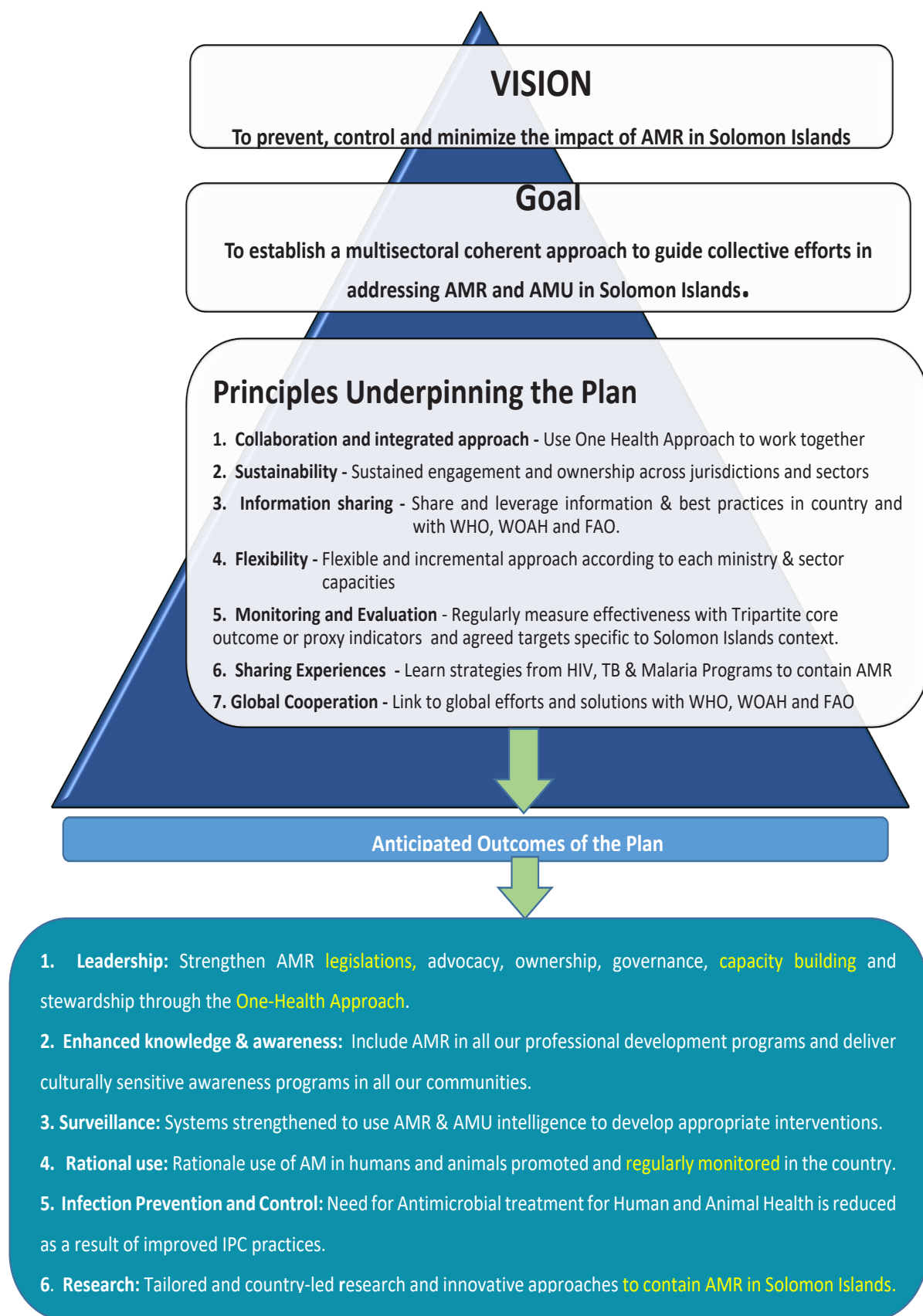
Antibiotics are used in animal husbandry as a growth promoter, prophylaxis or treatment of diseases. The importation, sale and use of antibiotics by MAL and veterinarians is unregulated. There is neither formal antibiotic registration nor system to monitor its use in animal or farming practices. There is no system that links the sharing of any data between the MAL and MHMS.

Construction of a laboratory for the MAL is currently underway. Private veterinarians assist MAL with laboratory testing of samples, however, no testing of antibiotic residue in animals or animal products can be conducted.

Figure 2 – A topic of Interest

Chicken feeds are imported from another country in the region for household and commercial poultry farming. There was no ingredient listing on the packaging. Information was obtained by emailing the company directly. Three antibiotics were included in the starter and finisher feeds. These were Avilamycin (for prevention of necrotic enteritis), Salinomycin (coccidiostatic antibiotic) and Zinc bacitracin (performance enhancing antibiotic to increase growth rate and feed utilisation). The majority (73%) of antimicrobials for use in animals belong to the same classes as those used in humans.

6.0 Strategic Intent of the Plan

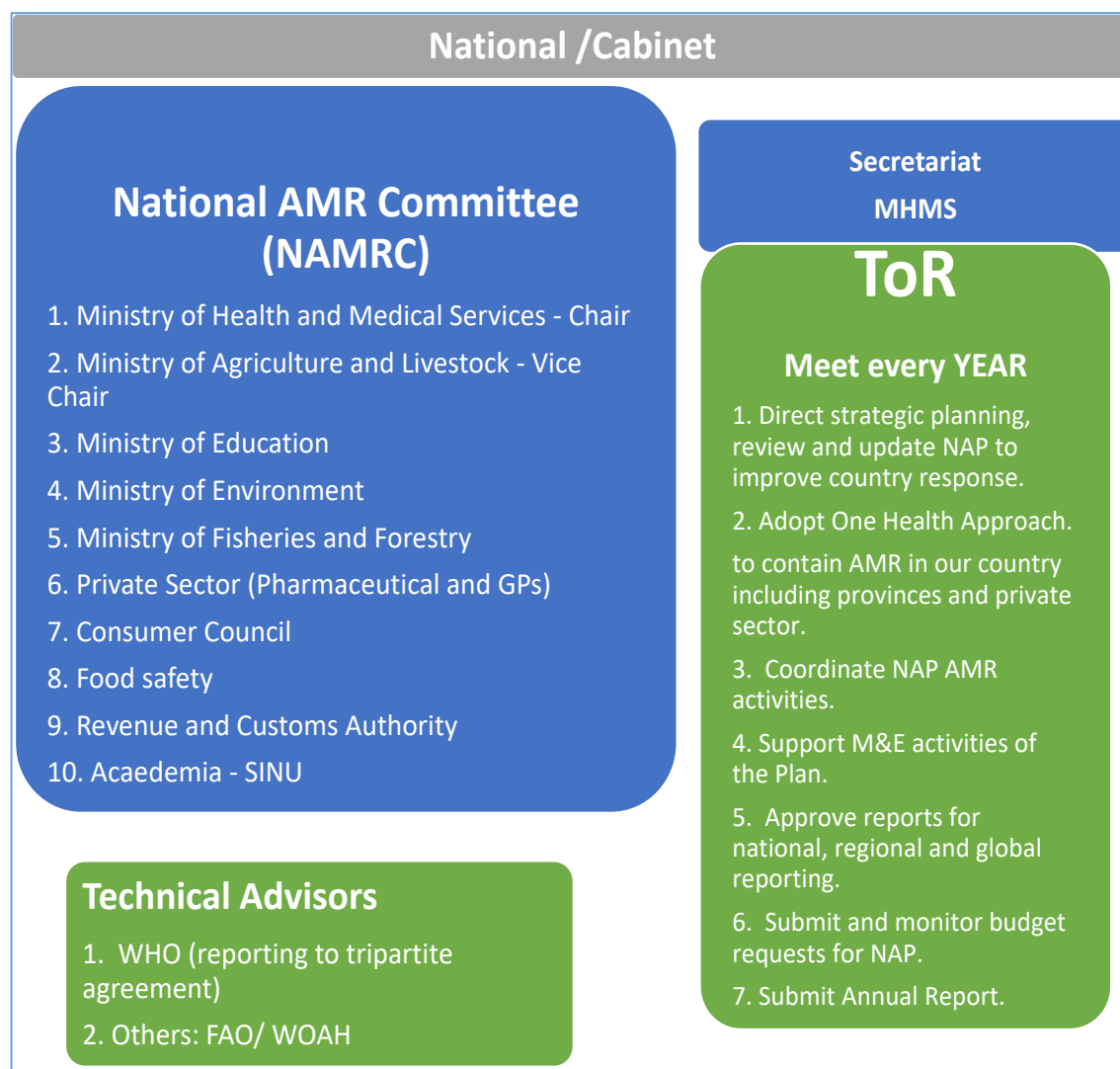


7.0 Budget

The costing of this plan will be linked to the Monitoring and Evaluation (M&E) Framework and developed in consultation with respective Ministry and donor partners to facilitate execution over the five-year period. Each assigned ministry will be responsible for the implementation of agreed activities. The MHMS as the nominated Chair and Secretariat of the National AMSC will facilitate the budgeting process and regularly report on the progress of implementation of the Plan with the National AMR Committee.

8.0 Governance Framework

The governance framework for the National AMR Committee is aligned to the established legal framework of the Government of Solomon Islands. The National AMR Stewardship Committee (NAMRSC) will report directly to the established National AMR committee.



9.0 Objectives of the National Action Plan

The six objectives of the plan are aligned to the strategic objectives of the 2015 WHO GAP and include the three 2014 priority actions of the regional framework against AMR. Corresponding components were formulated to assist the country in implementing, monitoring and reporting on the Solomon Islands National Action Plan on AMR.

Objective 1: Improve awareness and understanding of antimicrobial resistance through effective communication, education and training	Objective 2: Strengthen the knowledge and evidence base through surveillance and research
Objective 3: Reduce the incidence of infection through effective sanitation, hygiene and infection prevention measures	Objective 4: Optimize the use of antimicrobial medicines in human and animal health
Objective 5: Develop the economic case for sustainable investment that and increase investment in new medicines, diagnostic tools, vaccines and other interventions	Objective 6: Strengthen Monitoring and Evaluation to continuously improve the fight against AMR

10.0 Operational Plan for implementing mutually agreed activities

Objective 1: Improve awareness and understanding of AMR through effective communication, education and training

Strategic activities	Year				Responsible Agency
	2023	2024	2025	2026	
Component 1: Promote and support establishment of multisectoral (one-health) coalitions to address antimicrobial resistance at local or national level, and participation in such coalitions at regional and global levels.					
1.1 Endorse AMSC proposed governance structure for coordinating AMR to respective Ministerial Executive Committee including ToR	X	X	X	X	AMSC MHMS MAL MFMR MoEnv
1.2 Support and advocate the National AMSC for NAP funding, implementation, monitoring and reporting, integrating with other programs in respective Ministries	X	X	X	X	AMSC MHMS MAL MFMR MoEnv
1.3 Develop Memorandum of Understanding (MOU) with respective AMNC members to action annual budget requests, technical support, implementation, monitor & report on NAP	X	X	X	X	AMSC MHMS MAL MFMR MoEnv
1.4 Develop regulations/legal framework to recognize and employ para- veterinarians in the absence of veterinarians in the provinces	X				AMSC/ Office of the Solicitor General
1.5 Develop regulations to restrict and penalize importers, prescribers, sellers and users/farmers for non-compliance to current legislation related to the inappropriate use of antimicrobials	X	X	X	X	AMSC/ Office of the Solicitor General
1.6 Develop partnerships and engage with Civil Society Organization (CSOs) especially Consumer Council and private retailers/practitioners to develop policies, regulations, community messages etc., partake in implementing the NAP under the One Health Approach	X	X	X	X	AMSC MHMS MAL MFMR MoEnv
1.7 Support a project officer to coordinate One Health Approach of the NAP and provide secretariat support for AMR related activities	X	X	X	X	AMSC/MHMS/WHO
Component 2: Information, Education, and Communications					
1.2.1 Develop appropriate AMR training manuals by tripartite partners (MHMS MAL MFMR MoEnv) in partnership with Academia SINU (Schools of Agriculture, Nursing, Fisheries, Pharmacy, Human resource should include in syllabus)	X				AMSC MHMS MAL MFMR MoEnv

1.2.2 Include AMR and One-Health Approach as one of the core components in SINU (Schools of Agriculture, Nursing, Fisheries, Pharmacy, and Human resource) syllabi.							
1.2.3 Advocate to development partners to commission and support technical assistance to develop a country-specific Tripartite/One-Health Approach National Strategic Communication Plan on AMR.	X						AMSC MHMS MAL MFMR MoEnv
1.2.4 Each Ministry to submit annual budgetary requirements to support the One-Health Approach National Strategic Communication Plan on AMR.	X	X	X	X	X		AMSC MHMS MAL MFMR MoEnv
1.2.5 Develop, pre-test culturally sensitive/appropriate IEC materials in the common language for specific target groups in our communities – printed, audio/visual, mobile and electronic platform.	X						AMSC MHMS MAL MFMR MoEnv
1.2.6 Use One Health approach to conduct regular public awareness campaigns and continue to participate in the WAAW November annually and to include private retailers/practitioners	X	X	X	X	X		AMSC MHMS MAL MFMR MoEnv
1.2.7 Partner with Non-Governmental Organization (NGOs)/CSOs to develop innovative ways to reach masses to increase AMU/AMR awareness and understanding in the general public through community groups, churches, various media communications and provincial engagement	X	X	X	X	X		AMSC MHMS MAL MFMR MoEnv
Component 3: Establish antimicrobial resistance as a core component of professional education, training, certification and development for the health and veterinary sectors and agricultural practice.							
1.3.1 Conduct consultation with partners to identify funding sources and estimate budget for activities under this component.	Q1						AMSC MHMS MAL MFMR MoEnv WHO FAO WOAHP UNEP
1.3.2 Advocate to government of Solomon Islands to prioritize and support training of animal health specialists and veterinarians over the 5 years term	X	X	X	X	X		AMSC MAL
1.3.3 Develop training manual and provide advanced (re)training for para-veterinarians on the use of antimicrobials including objectives of the NAP	X	X	X	X	X		AMSC MAL
1.3.4 Prioritise and support the recruitment, appointment & training of a qualified veterinarian in MAL to implement, monitor and report on NAP activities for MAL such as supply chain management of antibiotics in animal health	X	X	X	X	X		AMSC MAL WOAHP
1.3.5 Support orientation and six monthly (re)training of professional technical staff on AMR, including all private practitioners in health, agriculture & fisheries and environment.	X	X	X	X	X		AMSC MHMS MAL MFMR MoEnv

1.3. Include AMR and related topics as a core component of professional education, training, certification and development for professionals as One Health approach.	X	X	X	X
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Objective 2: Objective 2: Strengthen the knowledge and evidence base through surveillance and research

Strategic activities	Year				Responsible Agency
	2023	2024	2025	2026	
Component 1: Antimicrobial Resistance Surveillance Program (Community)					
2.1.1 Strengthen surveillance systems across clinics and provincial hospitals to perform basic AMR surveillance and centralized data in the DHIS2	X	X	X	X	AMSC MHMS
2.1.2 Use antimicrobial susceptibility data from NRH Laboratory based on referred samples received from clinics and provincial hospitals to formulate targeted responses to community-associated AMR issues and trends	X	X	X	X	AMSC MHMS
Component 2: Nosocomial Infection Surveillance Programme					
2.2.1. Develop and endorse a costed plan to set up a National AMR surveillance system like WHONET to cater for the whole of the MHMS	X	X	X	X	AMSC MHMS
2.2.2 Designate a national reference laboratory (NRH) for AMR surveillance for the human health sector and strengthen capacities (human, structural and system) to perform NRL role	X	X	X	X	AMSC MHMS
2.2.3 Strengthen linkage and reporting of nosocomial infections between IPC and laboratory teams in NRH & provincial hospitals/clinics for proper response.	X	X	X	X	AMSC MHMS
Component 3: Antimicrobial Use Surveillance Programme					
2.3.1 Strengthen surveillance systems across non-health sectors to do AMR surveillance and support for MAL to establish a laboratory testing facility	X	X	X	X	AMSC MAL MFMR FAO WOA
2.3.2 Build laboratory capacity for identification, regular collection of animal health samples for identifications and monitoring of antimicrobial usage in food-producing animals and use data for action/policy decisions, linking with AMR data from human sector	X	X	X	X	AMSC MAL MFMR MHMS WHO FAO WOA

2.3.3 Establish a surveillance system, such as WPRACSS, to monitor antimicrobials import, distribution & use by national and sub-national medical stores, and explore the possibility of extending to develop a case mix approach to monitor the usage across provinces	X	X	X	X	AMSC MHMS WHO
2.3.4 Recruit and appoint a joint MAL & MFMR focal person to coordinate, monitor and report on all AMR related activities using the One Health approach	X	X	X	X	MAL MFMR
Component 4: Strengthening and networking of laboratories					
2.4.1 Establish a national coordination committee for One Health Approach surveillance of AMR and use data for country specific responses	Q1	X	X	X	AMSC MAL MFMR MHMS WHO FAO WOAHO UNEP
2.4.2 Strengthen the coordination between animal & human health laboratories	X	X	X	X	AMSC MAL MFMR MHMS WHO FAO WOAHO
2.4.3 Build laboratory capacity and infrastructure to test for antimicrobial resistant microorganisms in the environment, animal and human health for rapid and reliable diagnostic testing	X	X	X	X	MHMS WHO
2.4.4 Establish a national network of microbiology laboratories to contribute AMR data to a national database like WHONET	X	X	X	X	MHMS WHO
2.4.5 Introduce and support Laboratory Quality Management Systems and regular External Quality programmes to help standardize tests for identification of resistant microorganisms, maintain quality standards, ensure steady supply of laboratory consumables and ensure validity of results.	X	X	X	X	MHMS WHO

Objective 3: Reduce the incidence of infection through effective sanitation, hygiene and infection prevention measures

Strategic activities	Year				Responsible Agency
	2023	2024	2025	2026	
Component 1: Establish IPC programmes in health-care settings, agriculture and fisheries.					
3.1.1 Appoint IPC personnel to coordinate national IPC activities in each ministry facility using the One Health Approach principles.	X	X	X	X	MAL MFMR MHMS

3.1.2 Develop an annual IPC plan with adequate financial and human resources, allocated for IPC in tripartite sector facilities to follow, practice, and enforce IPC.	X	X	X	X	AMSC MAL MFMR MHMS
Component 2: Develop IPC practice guidelines, deliver training and ensure regular supplies					
3.2.1 Revise and update IPC guidelines at national level, and adoption of same at the Provincial level hospitals/clinics and agricultural sector (clinics/farms)	X	X	X	X	AMSC MAL MFMR MHMS
3.2.2 Develop formal training manual for IPC included in the AMR training manual for all technical staff in health and agriculture sectors.	X	X	X	X	AMSC MAL MFMR MHMS
3.2.3 Include hygiene and IPC as core (mandatory) content in training and education of all professionals – veterinarians, doctors, pharmacists, nurses, dentists, para-veterinarians and conduct audits of IPC	X	X	X	X	AMSC MAL MFMR MHMS
3.2.4 Develop plan in partnership with national medical/agriculture stores to ensure supply stability of PPEs, disinfectants, antiseptics, and soaps to improve hand hygiene and IPC compliance	X	X	X	X	AMSC MAL MFMR MHMS
3.2.5 IPC personnel to conduct regular IPC audits in all facilities in respective sector, report to respective authority for specific responses	X	X	X	X	AMSC MAL MFMR MHMS
3.2.6 IPC personnel to share IPC audit information and progress of interventions aligned to tripartite recommended indicators each year	X	X	X	X	AMSC MAL MFMR MHMS
3.2.7 Promote personal hygiene by social mobilization and behavioural change activities in communities – including education institutions, food facilities etc.	X	X	X	X	AMSC MAL MFMR MHMS
Component 3: Establish an effective waste management system, specifically addressing water sewage and landfills (solid waste) involving agricultural and medical waste and water quality testing at the health care facilities (HCF).					
3.3.1 Develop guidelines for waste management, implement suitable measures & treatment of waste from health, agriculture – food producing and aquaculture-based facilities including farms, poultry, and piggyeries	X	X	X	X	AMSC MAL MFMR MHMS
3.3.2 Support water quality testing at the HCF and plan and budget to ensure safe water as per WHO standards.	X	X	X	X	AMSC MAL MFMR MHMS
3.3.3 Explore opportunity to include RWASH programme in the NAP and to work in partnership with line Ministry.	X	X	X	X	AMSC MAL MFMR MHMS
Component 4: Promote vaccination as a method of reducing infections in humans, and food producing animals.					
3.4.1 Strengthen MHMS EPI and vaccination programmes for emerging diseases or outbreaks in all provinces to improve coverage and reduce infections in humans	X	X	X	X	MHMS WHO UNICEF

3.4.1 Introduce and strengthen vaccination programs for food producing animals in the Agricultural sector	X	X	X	X	MAL WOAHA FAO UNEP
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Objective 4: Optimize the use of antimicrobial medicines in human health and animal health

Strategic activities	Year				Responsible Agency
	2023	2024	2025	2026	
Component 1: Ensure regulation and governance of antimicrobial medicines					
4.1.1 Develop enabling regulatory framework for import, authorization and control of the quality of antimicrobials for use in human and veterinary sectors	X	X	X	X	MHMS MAL Office of Solicitor General
4.1.2 Update to include AMR and One Health Approach and endorse National Medicine Policy (NMP) for enforcement by MHMS	X	X	X	X	MHMS WHO
4.1.3 Update legislation and strengthen capacities for pre-licensing safety evaluation of AM for veterinary use shall be introduced, with consideration of potential resistance to drugs used in human medicine	X	X	X	X	MHMS MAL Office of Solicitor General
4.1.4 Review and update legislation to ban and penalize the importation, selling and use of Antimicrobials as growth promoters in Solomon Islands					MHMS MAL Office of Solicitor General
4.1.5 Submit proposal to AMSC and MAL MFMR to restrict and eliminate in a phased manner over 12 months period - the use of fluoroquinolones, and 3 rd /4th-generation cephalosporin in food-producing animals.	X				MHMS MAL
4.1.6 Update Pharmacy & Poisons Act 1978 or develop regulations to classify for Antimicrobials as prescription only medicines for disease control in humans and food-producing animals	X	X	X	X	MHMS Office of Solicitor General
4.1.7 Update regulations for all animal health products in Solomon Islands, including the importation, licensing, and sale of veterinary drugs, medicated feeds, and vaccines.	X	X	X	X	MHMS MAL Office of Solicitor General
4.1.8 Strengthen partnerships to enforce legislation for pharmacy officers working together with customs and police.	X	X	X	X	Police Customs MHMS

4.1.9 Strengthen regulatory affairs capacity to commence medicines registration into the information system using Schedule A in the Pharmacy and Poisons Act and EML as initial list	X	X	X	X	MHMS WHO
4.1.10 Buildup links, communication pertaining to AMR stewardship between the Pharmacy Regulatory Affairs unit and the private pharmacy retailers	X	X	X	X	MHMS Department of Pharmacy
4.1.11 Customs to enter and record submitted registered medicines list into the Asycuda system	X	X	X	X	AMSC MHMS Customs
Component 2: Ensure uninterrupted access to essential medicines of assured quality					
4.2.1 Strengthen the pharmaceutical supply chain, including the quantification, forecasting, procurement, supply and management system for essential medicines including AM and PPEs	X	X	X	X	MHMS NMS SLMS Pharmacy
4.2.2 Develop M&E checklist to assist in regular mentoring visits and support to provincials' hospitals and health clinics for reporting and specific responses	X	X	X	X	MHMS NMS SLMS Pharmacy
4.2.3 Advocate to MoF timely release of funds to procure and release medicines for public health use as per procurement plan	X	X	X	X	MHMS MoF
4.2.4 Procurement and Quality Control - The medicines information Centre to enter medicine quality data into the Medicine Quality Assurance website	X	X	X	X	MHMS Pharmacy
4.2.5 Establish a quality management system for the supply of medicines, covering storage, transport, expiry date, waste management NMS and SLMS.	X	X	X	X	MHMS NMS SLMS
Component 3: Appropriate use of Antimicrobials					
4.3.1 Create formal antimicrobial stewardship programs in health care facilities through education for better prescribing habits and awareness on Antimicrobials to improve knowledge and compliance including AMR risks.	X	X	X	X	AMSC MHMS Consumer Council
4.3.2 Strengthen Pharmacy and NMTC capacities to review & update human health EML aligned to WHO EML and veterinary medicines list in consultation with MAL.	X			X	MHMS MAL WHO WOAHA
4.3.3 Review, update, print and distribute/upload Antimicrobial STG to health practitioners at national/provincial and private health sectors	X				MHMS WHO
4.3.4 Support delivery of 6 monthly Antimicrobial STG training by NMTC to public and private practitioners at national and provincial health facilities.	X	X	X	X	MHMS WHO
4.3.5 Develop a national guideline to encourage prudent use of Antimicrobials in food-producing animals, with multi-disciplinary involvement, use and monitor.	X	X	X	X	MHMS MAL MFMR

4.3.5 Develop capacities and systems such as WPRACSS to conduct regular AMU audits and reviews for AMSC/NMTC presentations and recommend country response.	X	X	X	X	MHMS MAL MFMR WHO
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Objective 5: Develop the economic case for sustainable investment and increase investment in new medicines, Diagnostic tools, vaccines and other interventions

Strategic activities	Year				Responsible Agency
	2023	2024	2025	2026	
Component 1 – Strengthen capacities to develop an economic case to increase investments in new medicines, diagnostic tools, vaccines & other interventions.					
5.1.1 Assess possible future investment in new medicines, diagnostics tools, and vaccines (as a result of emerging infectious diseases or increased rate of AMR) to help build-up implementation of the NAP.	X			X	MHMS MoF

Objective 6: Monitoring and Evaluation (M&E); Research and Innovation

Strategic activities	Year				Responsible Agency
	2023	2024	2025	2026	
Component 1 – Develop M& E Framework using the logic model approach to regularly evaluate the AMR Plan; identify indicators and means to collect the information.					
1.1 Develop a Costing and Monitoring & Evaluation Framework using the logic model approach - Include Tripartite core and additional progress indicators	Q1 Q2				MHMS WHO

and country specific targets to regularly measure the effectiveness of NAP in the Solomon Islands – Phase 2 of the NAP						
1.2 Provide quarterly and annual report on the progress of implementation and effectiveness of NAP using the Costed and M&E Framework results plus other audits/reviews to enable the SIG to fund various projects that can improve our responses to contain AMR in the Solomon Islands.	X	X	X	X		MHMS AMSC
Component 2: Fund and provide support to operational research component to develop best practices to combat AMR in Solomon Islands.						
1.3 Using One Health Approach, advocate to SINU, WHO, FAO, WOAHA and UNEP to support (technical and fund) operational research opportunities in MHMS, MAL and MFMR	X	X	X	X	X	MHMS MAL MFMR AMSC WHO WOAHA FAO UNEP
1.4 Fund and implement feasible recommendations from Operational Research studies to improve systems, best practices and policies to help contain AMR in Solomon Islands	X	X	X	X	X	MHMS MAL MFMR AMSC WHO WOAHA FAO UNEP

10.0 Implementation Framework

10.1 Strategic Operational Plan

Upon the adoption of the endorsed Solomon Islands National Action Plan on Antimicrobial Resistance, the National AMR Committee will develop an annual Operational Plan over the five years. This will include detail activities linked to indicators and targets with responsibilities to help implement the National Action Plan on AMR.

10.2 Costing and M&E Framework

The National AMR Committee will develop a Costing and M&E Framework to assist in submitting for annual budgetary requirements linked to an aligned results-based M&E Framework.

10.3 Review and Evaluation

The Solomon Islands National Action Plan on Antimicrobial Resistance will be reviewed every three years, or more frequently if necessary.

