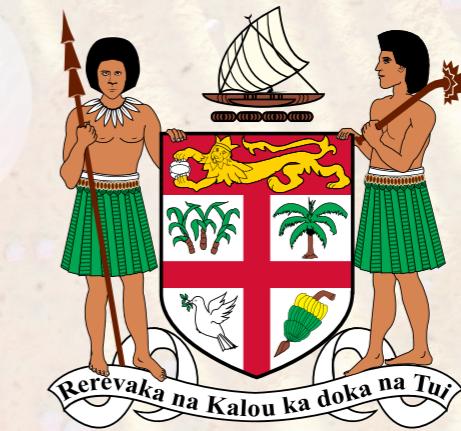




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**FIJIAN GOVERNMENT**

**ONE HEALTH  
NATIONAL ACTION PLAN  
ON  
ANTIMICROBIAL RESISTANCE**

**2022 to 2025**

Developed by:





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**REPUBLIC OF FIJI**

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**NATIONAL ACTION PLAN ON  
ANTIMICROBIAL RESISTANCE  
2022 to 2025**



*“Antimicrobial resistance is one of the greatest health challenges of our time, and we cannot leave it for our children to solve.”*

**Dr Tedros Adhanom Ghebreyesus**  
**WHO Director-General**  
**(November 2020)**

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## Acronyms

|         |  |
|---------|--|
| AAAWPR  | Action Agenda for Antimicrobial Resistance in the Western Pacific Region |
| AH      | Animal Health  |
| AMC     | Antimicrobial Consumption  |
| AMR     | Antimicrobial Resistance   |
| AMU     | Antimicrobial Usage  |
| AST     | Antibiotic Susceptibility Testing  |
| DP      | Development Partner  |
| FP      | Focal Point  |
| GAP     | Global Action Plan   |
| GLASS   | Global AMR Surveillance System   |
| GoF     | Government of Fiji   |
| HH      | Human Health   |
| IPC     | Infection Prevention and Control   |
| LIMS    | Laboratory Information Management System                                 |
| MEHA    | Ministry of Education, Heritage and Arts                                 |
| MoA     | Ministry of Agriculture  |
| MoF     | Ministry of Fisheries  |
| MHMS    | Ministry of Health and Medical Services                                  |
| NAP     | National Action Plan   |
| NARC    | National Antimicrobial Resistance Committee                              |
| NMTC    | National Medicines & Therapeutics Committee                              |
| NGO     | Non-governmental Organization  |
| OH      | One Health Approach  |
| PHC     | Primary Health Care  |
| PICs    | Pacific Island Countries   |
| RDP     | Role Delineation Policy  |
| SDG     | Sustainable Development Goals  |
| SPC     | Secretariat of the Pacific Community                                     |
| QMS     | Quality Management System  |
| UHC     | Universal Health Coverage  |
| WAAW    | World Antibiotics Awareness Week   |
| WPRACSS | Western Pacific Regional Antimicrobial Consumption Surveillance System   |
| WHO     | World Health Organization  |
| WHONET  | WHO global surveillance for antibiotic resistance                        |

## Foreword

Anti-microbial Resistance (AMR) is real. It threatens the very core of modern medicine and adversely affect our responses against infections, in both preventative and clinical services settings. Our government is committed to adopting the One Health Approach against AMR now and onwards to 2030. This is more critical than ever with the global fight against COVID and other emerging diseases.

Misuse of antibiotics is among the main drivers underpinning the development of AMR. Resistance to last-line antibiotics also compromises the effectiveness of life saving medical interventions such as intensive care, cancer treatment and organ transplantation. This plan is aligned to global, regional and national priorities and cultural factors that will help shape “wise” antimicrobials use, the emergence, and transmission of resistance and how to combat AMR. If we do not practice good antimicrobial stewardship, we and future generations will not experience the positive outcomes of these medicines that our parents experienced, but succumb to simple infections unlike before the pre-antibiotic era.

The 74<sup>th</sup> World Health Assembly (WHA) held in June 2021, reinforces three continuing commitments to tackle this “silent tsunami” AMR in low- and middle-income countries: (1) urgent need for better vaccines access; (2) more funding committed and (3) a new global legal framework. The May 2015 WHA adopted the Quadripartite Global Action Plan (GAP) for us all to collaborate by sharing resources and information to align and harmonize our fight against this global health threat under these five strategic objectives:

1. To improve awareness and understanding of antimicrobial resistance through effective communication, education and training;
2. To strengthen the knowledge and evidence base through surveillance and research;
3. To reduce the incidence of infection through effective sanitation, hygiene and infection prevention measures;
4. To optimize the use of antimicrobial medicines in human and animal health, and;
5. To develop the economic case for sustainable investment, takes into account our context.

Additionally, the Framework for Accelerating Action to Fight Antimicrobial Resistance in the Western Pacific Region provides guidance towards this review: (i) to strengthen systems as foundation for sustainable actions; (ii) to work beyond health; (iii) to take actions today, guided by their vision of the future; and (iv) to build solutions from the ground up, while ensuring country impact.

With One Health Approach to combat AMR, our partners in government, academia, development partners and civil society organisations; we will stay true to our commitment to safeguard against environmental threats and public health

emergencies and ensuring better collaboration key health-related and SDG issues such as climate crisis and AMR. The development of this new action plan was highly consultative, participatory and transparent

Apart from climate change and NCDs; AMR is a real threat to our island home. We must work as one and be the stewards of the future. We remain committed and wish us all every success in implementing the activities of the Plan.

Together we can. Together we will. Together we must.



Permanent Secretary  
Ministry of Health and  
Medical Services



Permanent Secretary  
Ministry of Agriculture



Permanent Secretary  
Ministry of Waterways and  
Environment

## Acknowledgements

Thanks to the Ministry of Health and Medical Services, the current host for the National Antimicrobial Committee (NARC) and other relevant stakeholders from other Ministries and One Health partners invaluable assistance in crafting this second edition. The support from the following organisations is gratefully acknowledged: Ministry of Agriculture, Ministry of Fisheries, Ministry of Waterways and Environment, Ministry of Economy, Biosecurity Authority of Fiji, Fiji Revenue and Customs Authority, Consumer Council of Fiji, Secretariat of the Pacific Community, Food Agriculture Organisation, AusFacility, Fiji National University and University of the South Pacific.

Thanks also to all participants from our One Health Partnership who attended and presented during the two-days review workshop on 2<sup>nd</sup> to 3<sup>rd</sup> June 2022.

Finally, thanks to the World Health Organization for the financial and technical support to formulate the Fiji National Action Plan against Antimicrobial Resistance 2022-2025.



## Glossary

**Antimicrobials** - include antibiotics, antivirals, antifungals and antiprotozoals. They are active substances of synthetic or natural origin which kill or inhibit the growth of microorganisms. Used in every-day medicine (e.g., urinary tract infections, surgery and care of premature babies), they are vital to preventing and treating infections in humans and animals)

**Antimicrobial Resistance (AMR)** - is the ability of microorganisms, such as bacteria, to become increasingly resistant to an antimicrobial to which they were previously susceptible. AMR is a consequence of natural selection and genetic mutation. Such mutation is then passed on conferring resistance. This natural selection process is exacerbated by human factors such as inappropriate use of antimicrobials in human and veterinary medicine, poor hygiene conditions and practices in healthcare settings or in the food chain facilitating the transmission of resistant microorganisms. Over time, this makes antimicrobials less effective and ultimately useless.

**One Health** - is a term used to describe a principle which recognises that human and animal health are interconnected, that diseases are transmitted from humans to animals and vice versa and must therefore be tackled in both. The One Health approach also encompasses the environment, another link between humans and animals and likewise a potential source of new resistant microorganisms. This term is globally recognised, having been widely used and in the 2016 United Nations Political Declaration on Antimicrobial Resistance.

## 1. Introduction

The Republic of Fiji, one of the largest economies of the South Pacific region, has a relatively high level of human development index (HDI) of 0.743. Its multi-ethnic population, which is estimated at approximately 850 thousand, is growing slowly due to a moderately low level of fertility and a high level of emigration.<sup>1</sup> The adult literacy rate in Fiji was estimated at around 91.6 percent. Primary and secondary school education is free and compulsory for all Fijians.

Fiji's economy is largely agricultural, main export commodities are sugarcane, fruits such as papaya and root crops such as taro and kava.<sup>2</sup> Subsistence farmers earn supplementary cash income. Remittances is an upcoming major source of foreign exchange. Fiji is classified as an Upper Middle-Income country (UMIC) by the World Bank in 2019. Fiji's economy is slowly on its way to recovery post-COVID.

Life expectancy was 68 years in 2020.<sup>3</sup> Tuberculosis is widely prevalent and other common diseases include Hepatitis A and typhoid. Sexually transmitted infections (STIs) are high in the country. Key non-communicable diseases are diabetes and coronary health diseases followed by stroke. Anecdotal reports state high diabetic infections are poorly managed in communities and can be a major "AMR incubator."

In 2021, Universal Health Coverage (UHC) and International Health Regulations (IHR) Core Capacity indices were rated at 98 and 61 percent<sup>4</sup> respectively. However, effective HIV and TB treatment coverage were both low at 40 percent and 64.8 percent. Strong immunization cover was greater than 99 percent for all under 5 vaccines. More than 68 and 99 percent of our people access piped water and basic sanitation services. Fiji has low out-of-pocket spending, suggesting a low risk of financial hardships.<sup>5</sup>

The Fijian Government is congratulated, having continually stepped up since 2015 - making AMR a high priority health agenda. The Constitution 2013 under Article 38; declares a person's right to health and within the Government's resources to ensure good wealth and well-being. The National Development Plan (NDP) 5/20 has a two-prong approach of "Inclusive Socio-economic Development" and "Transformational Strategic Thrusts" to support the Human Health Sector strategic intent.

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<sup>1</sup> <https://pacific.unfpa.org/en/publications/population-and-development-profiles-pacific-islands-countries>

<sup>2</sup> <https://www.export.gov/apex/article2?id=Fiji-Agricultural-Sector>

<sup>3</sup> <https://data.worldbank.org/indicator/SP.DYN.LE00.IN?locations=FJ>

<sup>4</sup> [https://cdn.who.int/media/docs/default-source/world-health-data-platform/events/tracking-universal-health-coverage-2021-global-monitoring-report\\_uhc-day.pdf?sfvrsn=fd5c65c6\\_5&download=true](https://cdn.who.int/media/docs/default-source/world-health-data-platform/events/tracking-universal-health-coverage-2021-global-monitoring-report_uhc-day.pdf?sfvrsn=fd5c65c6_5&download=true)

<sup>5</sup> [Fiji \(who.int\)](https://www.who.int/WHO引文)

All Quadripartite Partner line ministries have a common pledge as “stewards of the future<sup>6</sup> to mitigate risks such as climate crisis, AMR and emerging diseases that can affect our population, economic development and environment. **Animal Health (AH)** sector focuses on three (3) Strategic Priorities, M&E framework that links up and measures commitments to improve food security through teaching farmers to adopt safe plant-based and livestock food production practices; strengthen legislative/regulatory and policy frameworks. **Environment Health (EH)** focus on strengthening sectoral policies, legislations and better waterways/environment management.

**Human Health (HH)** sector’s strategic intent to 2025 strongly resonates with WHO and NDP commitments under Strategic Priorities 1 and 3; to Safeguard against environmental threats and public health emergencies and “ensuring better collaboration with other government departments on key health-related and SDG issues such as climate crisis and AMR.” MHMS has pledged to strengthen systems that can prevent, detect, respond and monitor public health emergencies. The National AMR Committee (NARC) is recognised in using an “interagency approach to combat AMR” – a **One Health Approach**.

**Border Control** - The Biosecurity Authority of Fiji (BAF) and Fiji Revenue Customs Services (FRCS) are core One Health partners. BAF is the World Organisation for Animal Health (WOAH) national focal point on veterinary products. Their roles have not been maximised by NARC due to lack of legislation framework. New regulations to the Fiji Medicinal Products Act 2011 are critical to fully mandate their border and in-country functions to prohibit importation, use and eradicate harmful products that contribute to the AMR burden.

Developments partners (DP), Civil Society Organisations (CSO), Academia, whole of government and community support is vital. Transformational multisectoral support can facilitate progress towards meeting the AMR Sustainable Development Goals (SDGs) sensitive indicators.<sup>7</sup>

**Tripartite AMR Country Self-assessment Survey (TrACSS)** - NARC has good leadership and governance. NARC has six technical working groups (TWGs) structures with draft Terms of References (ToR) and will be gazetted shortly. Some progress seen in improving the 2014 TrACSS major gaps and challenges.<sup>8</sup> In summary, the draft 2022 TrACSS has highlighted 1) the need to fully adopt and continue to strengthen One Health Approach partnership 2) lack of legislations against use of medicated feed and antibiotics as growth promoters and to fully mandate the One Health Approach 3) continue to improve community awareness and professional AMR education in all sectors; 4) Lacks a national integrated surveillance system; no national mycology reference laboratory and lack of strategic AMR intelligence

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<sup>6</sup> Ministries – Health and Medical Services, Environment & Waterways, Forestry, Agriculture, Fisheries

<sup>7</sup> AMR SDG sensitive indicators (1, 2, 3, 6, 9, 12 and 17)

<sup>8</sup> Fiji NAP 2015, 2014 TrACSS: 1) lack of awareness on antimicrobial resistance in all areas; 2) lack of national comprehensive policies on antimicrobial resistance; 3) lack of national surveillance systems to monitor antimicrobial resistance and antimicrobial use; and 4) poor regulation and implementation of health systems responses to antimicrobial resistance.

for informed decision making and responsive policy formulations; 5) need to formalise good Infection Control Prevention Care in all sectors; 6) COVID-19 and lack of dedicated government funding had overall negative impacts; and 7); lacks national monitoring system to track NAP implementation and quality improvement programs.

## **2. A pragmatic and doable National Action Plan**

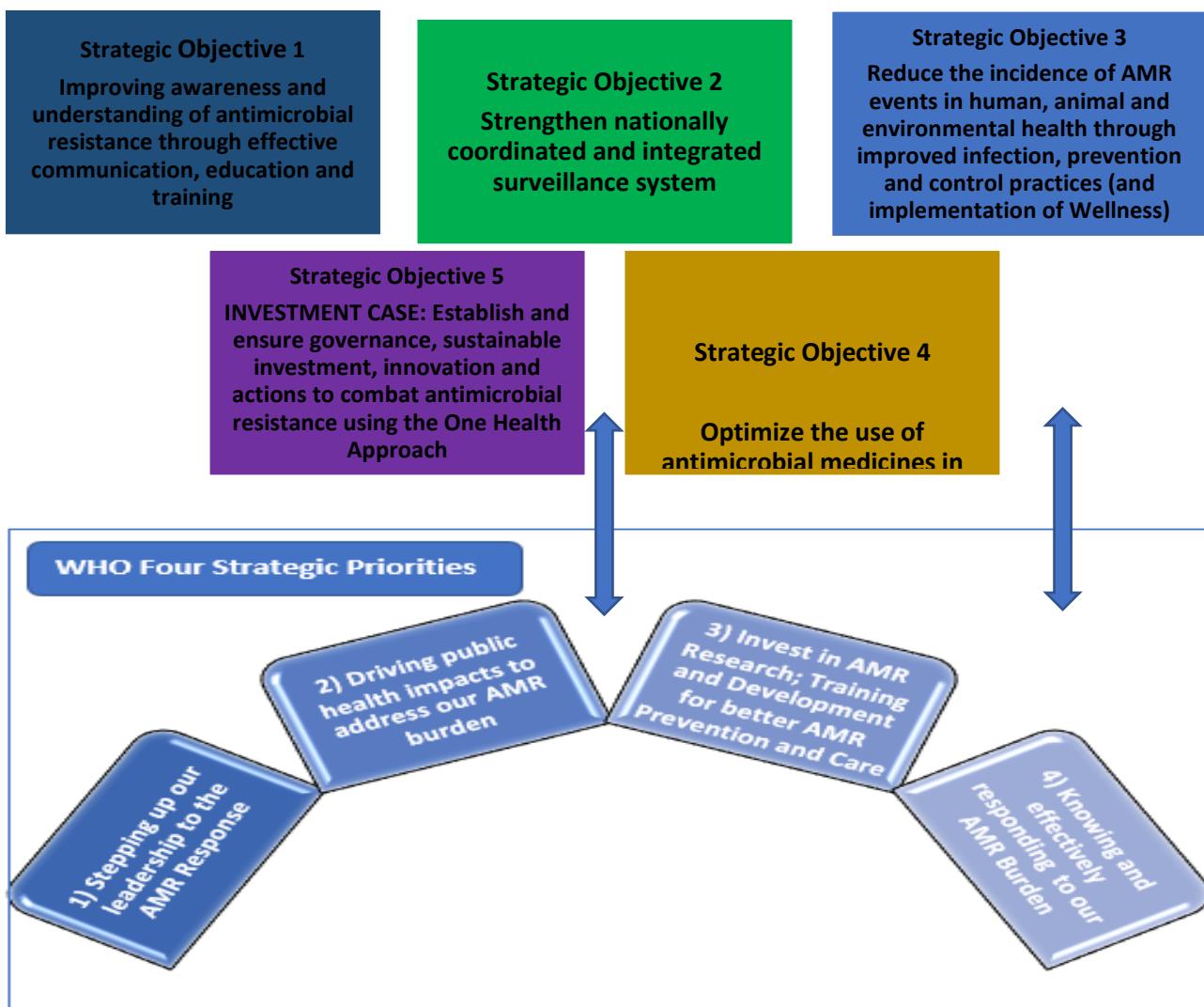
The WHO's Strategic and Technical Advisory Group on AMR (STAG-AMR) emphasises the need for member states to prioritise the human health agenda. Stepping up leadership, governance and investments on AMR and learning from other public health agendas can identify tailored potential solutions. Knowing our AMR burden by investing in strategic AMR intelligence through research, surveys and routine surveillance in this NAP lifetime.

This NAP is aligned to the WHO GAP 2015 five Strategic Objectives (SO). The post-Covid 2022 WHO Strategic Priorities (SPs) on AMR<sup>9</sup> is used as reference to strategically prioritise NAP activities during this last decade of action. NARC commits to adopting the One Health Approach to implement NAP. NARC has prioritised cost effective and impactful mutually agreed activities in the workplan that will contribute towards reducing the AMR burden in Fiji, as in Figure 1.

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<sup>9</sup> <https://apps.who.int/iris/handle/10665/351719>

**Figure 1 2015 WHO gap strategic priorities and 2022 WHO four AMR strategic priorities**



### 3. The Need for our Action Against AMR - One Health Approach

**State of Play:** Penicillin was first discovered in 1928. These life-saving antimicrobials (AMs) have revolutionised our societies. Fast forward to this era, the risk of AMR has intensified, the main driver is abuse and misuse of AMs. Fiji is not spared from the increasing emergence and spread of multi-resistant organisms. We must act now to reverse current AMR trends. If not, we could face a return to the pre-antibiotic era; simple wounds and infections causing significant harm and morbid outcomes.

The World Bank<sup>6</sup> has warned that, by 2050, drug-resistant infections could cause global economic damage on a par with the 2008 financial crisis. AMR also threatens the

achievement of several of the United Nations' SDGs, in particular SDG3 - for good health and well-being.<sup>7</sup>

Why do we need the **One Health Approach** to combat AMR:

- ❖ We share the same environment with animals.
- ❖ We are exposed to the same general families of bacteria and other microbes.
- ❖ We are treated with the same group of antimicrobials, and;
- ❖ Microbes can pass from animals to humans and vice versa with the environment acting as a potential reservoir of resistant organisms, as in **figure 2**.

**Global:** The recent Lancet Publication<sup>10</sup> estimated that in 2019, about 4.95 million deaths were associated with AMR, of which, 1.27 million deaths attributed to bacterial AMR. About 1.25 million people died from lower respiratory infections – making it the most challenging infection. Majority of AMR associated deaths occurred in the Western African sub-Saharan region and the lowest in Australasia.

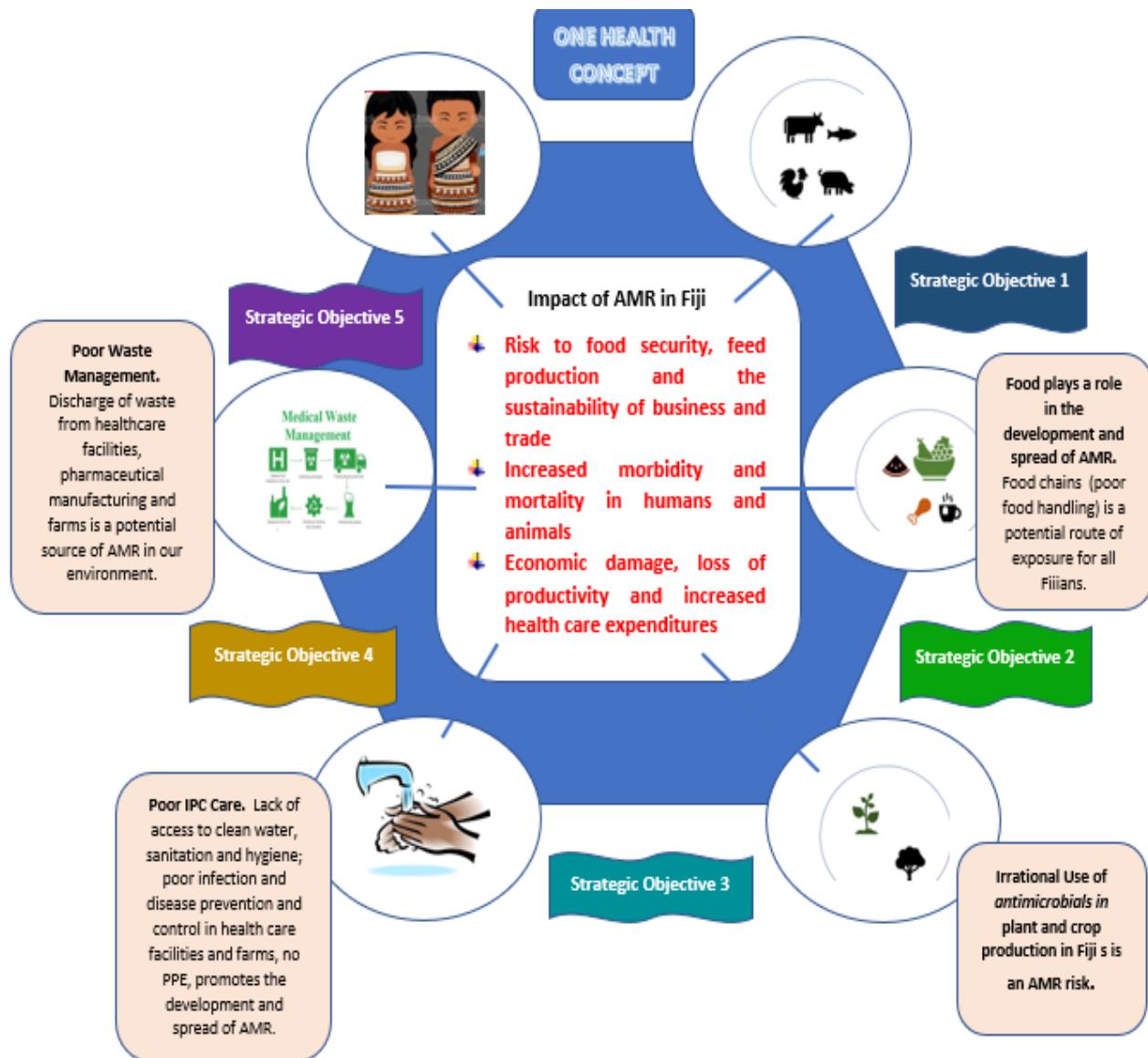
The top six pathogens for deaths associated with resistance are (*Escherichia coli*, followed by *Staphylococcus aureus*, *Klebsiella pneumoniae*, *Streptococcus pneumoniae*, *Acinetobacter baumannii*, and *Pseudomonas aeruginosa*) were responsible for about 20% deaths attributable to AMR and 3·57 million deaths associated with AMR in 2019.

One pathogen–drug combination, methicillin-resistant *S aureus*, caused more than 100 000 deaths attributable to AMR in 2019, multidrug-resistant excluding extensively drug-resistant tuberculosis, third-generation cephalosporin-resistant *E coli*, carbapenem-resistant *A baumannii*, fluoroquinolone-resistant *E coli*, carbapenem resistant *K pneumoniae*, and third-generation cephalosporin-resistant *K pneumoniae*.

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<sup>10</sup> Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis, January 2022.

**Figure 2: A One Health Response at a National level is Critical to Address the Challenge of AMR**



(Adapted from – European One Health Initiative Plan Against AMR 2017)

**Blue Pacific:** Recent analysis publication<sup>11</sup> showed a wide range of WHO priority pathogens existed in the Pacific Island Country and Territories(PICTs), with *E.coli*-3rd generation cephalosporin resistance proportions from 12% in Fiji, 0% in Kiribati, 24% in PNG and 77% in Federated States of Micronesia – well below other AMR ‘hot spots’ like China (20%-95%) and India (66%). Resistance to key antibiotics like Carbapenem remains low despite multiple reported outbreaks; however, 1% of *K pneumoniae* isolates surveillance reported from a Fijian tertiary hospital. These indicates urgent need to invest in improving AMR intelligence;

<sup>11</sup> Loftus MJ, Stewardson AJ, Naidu R, et al. Antimicrobial resistance in the Pacific Island countries and territories. BMJ Global Health 020;5:e002418. doi:10.1136/bmjgh-2020-00241

strengthening laboratory surveillance systems; Infection Prevention Control and Antimicrobial Stewardship Programs.

Moreover, a latest report showed high incidences of community acquired Methicillin-Resistant Staphylococcus aureus (MRSA) and Extended-spectrum beta-lactamases (ESBL) infections in Pacific Island Countries and Territories.<sup>12</sup> The Kingdom of Tonga reported a high MRSA rate of 42% in 2016, that prompted routine laboratory-based surveillance; 60% of MRSA cases were diabetics from 40 to 60 years of age due to poorly managed diabetic-infections in community settings. A Nauru costing study estimated economic costs to Salmonella Typhi outbreak in restaurants was at USD46, 000 – critical to improve food hygienic and safety handling practices.

**Our Island Home: A Carbapenem resistant Acinetobacter baumannii (CR-Ab) research<sup>13</sup>** at an adult Intensive Care Unit (ICU) attributed these issues as possible causes for the CR-Ab Outbreak:

- ❖ long hospital ICU stay (median/maximum at 26/31 days);
- ❖ poor IPC practices and both first-line antibiotics and IPC products supply instability;
- ❖ inappropriate use of restricted antibiotics such as meropenem was at 47%; and,
- ❖ high risk of person-to-person transmissions via contaminated hands or surfaces.

The majority (24/35, 69%) were isolated from invasive samples, including indwelling tips and blood culture, and 31% were from non-invasive samples associated with urinary, respiratory, and surgical site infections. Sources of strain may be linked to international travel from India and Australia. The research report strongly echoed the last ICU 2017 recommendations of: 1) improving cleaning of patient care environment and equipment, avoiding reuse of single-use, disposable equipment and ensuring effective sterilisation of items; 2) improving IPC practices, including appropriate hand hygiene, transmission-based precautions (especially contact precautions), use of sterile medications/solutions for injections; 3) to the future, incorporate molecular diagnostic and surveillance capacity frameworks to improve response to disease outbreaks in Fiji.

**The WHO Survey of the Progress of Implementation of NAP in the Pacific Report 2020** urgently calls on Fiji MHMS and NARC to improve governance structures and update legislations enabling One Health Approach; strengthen and integrate laboratory and surveillance capacities; reposition Fiji CDC as National Reference Laboratory in human health; improve supply stability of antimicrobials and laboratory diagnostics; partner with other PICTs/Secretariat of the Pacific Community (SPC) to develop formal training in surveillance, AMS, IPC and One Health; encourage culture of research in all sectors including KAP survey, Operational Research to improve One Health against AMR interventions, update necessary AMS flagship documents; credible AMR intelligence to craft market-segmented

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<sup>12</sup> Antibiotic Resistance in Pacific Island Countries and Territories: A Systematic Scoping Review, Nicola D Foxlee et al, *Antibiotics*, MDPI, 2019

<sup>13</sup> Threat of Carbapenem-resistant Acinetobacter baumannii at the intensive care unit of the Colonial War Memorial Hospital, Fiji

community health education programs on AMR linked to other public health programs; adopt AMC/WPCRASS by 2025 and work with academia to improve pharmaceutical and animal waste management.

The **University of the South Pacific (USP)** conducted research on pharmaceutical waste management in selected coastal sites on Viti Levu. Findings revealed 80 pharmaceuticals were found. Literature stated, that main sources were via sewage plants, primary, secondary and tertiary levels, USP will need to trace back to presumed sources. Agriculture sources have been suggested via use of antibiotics in livestock (animal waste) and disposal of expired pharmaceuticals.

Consistent presence of Sulphamethoxazole (in Septrin®/Bactrim®), Trimethoprim and antidepressants. Impact of these pharmaceuticals are detrimental to marine life due to its long presence. Communities are strongly advised to clean and cook marine life well in these surveyed sites such as Votua, Laucala Bay and Leleuvia Island.

**Project Reviews:** Resonates with WHO 2020 review. The October 2021 Mid-term Review of the multi-partnership (One Health Approach) **Enhancing the Management of AMR (EMAR)** in Fiji, recommends to: develop and test cost-effective methods to achieve integrated public health surveillance networks for AMR; develop a strategy for qualitative data collection to be included in the Knowledge Attitudes Perceptions (KAP) analysis - ensure alignment, where possible, of the structured KAP surveys across the human and animal health components; Include thinking on broader integrated (LIMS) and associated sustainability of laboratory capacity building; improve communications with one vision and one purpose with Quadripartite partners and associates; ensure the design of communication, policy and outreach materials are informed by the project activities to be 'fit for purpose' for the intended audience; integrated One Health approaches to AMR surveillance and management in the Pacific; Project may extend to 2027. Include feasible recommendations and transitioning details into the new NAP for continuity.

The DFAT supported **COMBAT-AMR** plans to strengthen and support review of NARC meeting agenda to indicate collaborative and one health reporting; Support AMS technical working group; Support review of the national action plan; Discussions with SPC for proposed inclusion of AMR modules in regional education packages. **AH:** Very little AMR intelligence on antimicrobials imported and used. Discussions on AMU guideline during the Fiji Visit to align to local context and process of endorsement, Discussions on training opportunities with SPC. **EH:** Very little data and One Health and explore opportunities to work together; possible priority clean water and waste management. **HH:** Wins in IPC, vaccines uptake and surveillance as Fiji continues to strengthen its fight to contain COVID-19. Continued sessions of the AMS modules – Part 1 completed and Part 2 to commence discussions on monitoring and reporting systems. Advice and technical guidance for COVID-19 laboratory testing, closely collaborating with Colonial War Memorial Hospital micro laboratory to support review and update of SoPs and foster greater clinical liaison between laboratory, AMS and IPC.

**Recent developments and way forward:** On May 28<sup>th</sup> 2022, the 75th World Health Assembly approved a ‘Global Strategy on Infection Prevention and Control (IPC)’ through a resolution that aims to position IPC as central to infectious hazard and health emergency preparedness and response.<sup>14</sup> It is key to addressing the silent burden of healthcare associated infections (HAIs) and AMR.

Strengthen IPC in both community and health systems and high-quality patient-centred care delivery, with the aim of improving patient and health worker safety. This resonates well with the recent launch of the National Infection Prevention Control Guidelines for HH use in all public health facilities. MHMS will continue to improve timely supply stability of IPC commodities. Strengthening good compliance to personal and workplace IPC care was a BIG WIN during the COVID-19 Pandemic. Fiji will position IPC as central as a cost-effective and high impact activity in reducing the burden of AMR – integrated with the other four GAP strategic objectives.

Antimicrobial Consumption (AMC) data call from public health hospitals via AMC/WPCRASS will commence in 2023. This will extend as a pilot call in selected private locally pre-qualified wholesalers/importers in 2024.

AMR is a good example of a One Health approach in which human health is connected to that of animals, and the environment. Only a multidisciplinary effort can provide an adequate response. The April 2022 UNEP publication Environmental Dimensions of Antimicrobial Resistance emphasises the need on strengthening the Quadripartite partnerships.

Climate crisis with ever increasing temperature and severe natural disasters fuels climate-sensitive infections such as dengue, leptospirosis, typhoid, diarrhoea, respiratory and skin infections that may be resistant to first line antimicrobials. Waste and clean water management is critical especially with chemicals such as pesticides from farms; animal and industrial waste; household waste and proper disposal of expired pharmaceuticals that will contaminate our waterways and marine life.

Prepositioning Fiji to be successful mandates. the adoption of One Health Approach to secure good governance and technically sound investment cases that are integrated “best-buys” resulting in high-impact positive health outcomes.

The decisions we make today will make us have a brighter future. We have the power to change big things. We can have big wins against AMR.

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<sup>14</sup> <https://www.who.int/news/item/28-05-2022-seventy-fifth-world-health-assembly--daily-update--28-may-2022>

## 4. One Health Approach – Reviewing and Updating the Plan

The Consultant presented to the six NARC technical working groups (TWGs) and the NARC plus key informant interviews (KIIIs) in May 2022. A situation analysis was developed from review of both published and unpublished data, surveys and analysis of KII results. To seek validation, a two-day One Health stakeholders' consultation workshop was conducted in early June 2022. The workshop enabled the development of mutually agreed strategic intent, objectives, priority, pragmatic and realistic activities for the workplan greatly assisted to craft the updated NAP, **Figure 3**.

The One Health NAP against AMR will be vetted by NARC before endorsements by MHMS Executives and Cabinet with accompanying Policy Paper. Cabinet endorsement allows for both governance and sustainability.

**Figure 3 – Diagram of One Health Approach in updating the National Action Plan**



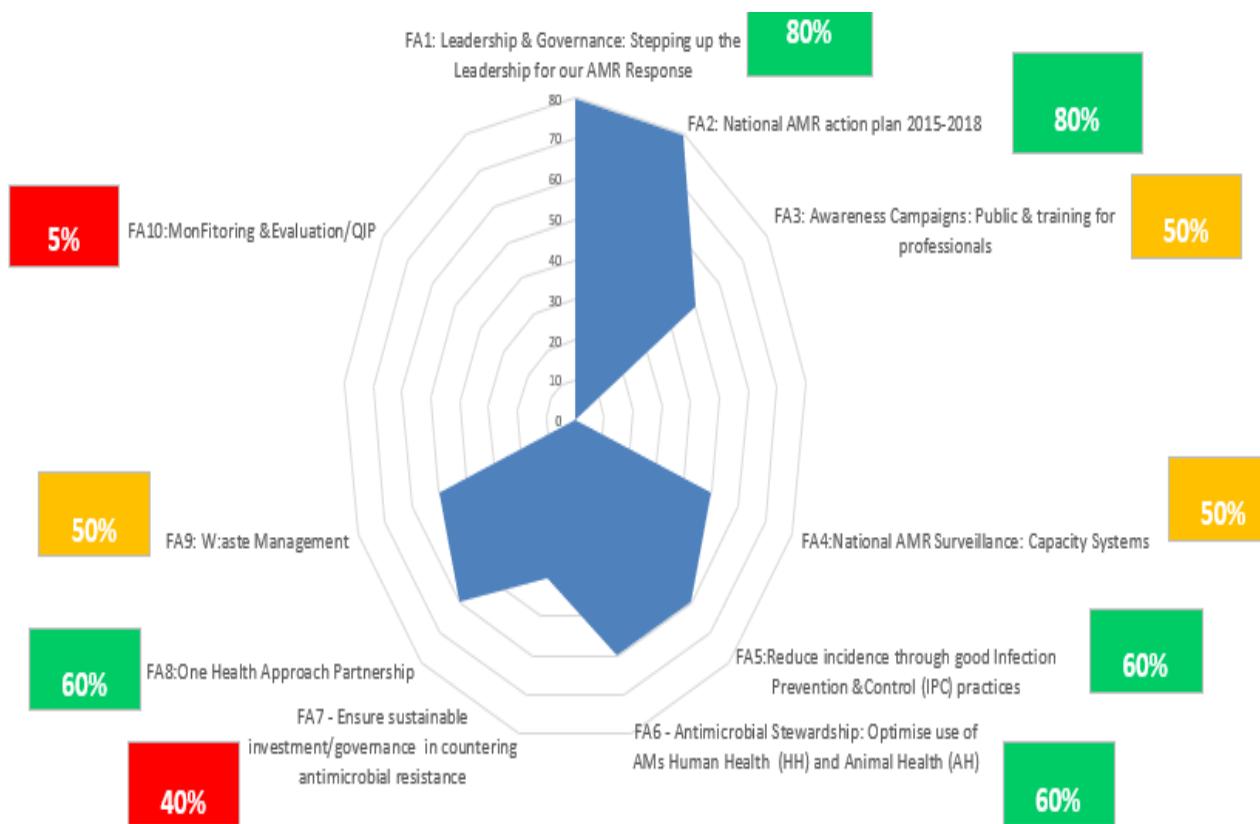
## 5. Summary of brief Situational Analysis on AMR in Fiji

Collated information was analysed and synthesised aligned to the five GAP strategic objectives and four WHO Strategic Priorities. These were further simplified to ten (10) focus areas (FA) to plot the current status of AMR in Fiji, graphic-**Figure 4** and narrative format.

The NARC Secretariat can use the radar chart as a tool to monitor progress. The Fijian Government encourages all ministries to reach at least 60% success in all projects, in this context our ten focus areas. NARC will continue to strengthen these FAs over the NAP lifetime.

The current situation shows **five (of ten) focus areas scoring at most 50%**. **Linked activities in the new NAP will be prioritised to be implemented first**. Strengthening legislations and systems coupled with strong advocacy measures to drive the other five focus areas towards at least 80% grading in 2025. Fiji will adopt the One Health Approach to combat AMR during last decade of action.

**FIGURE 4 – RADAR CHART FOR CURRENT AMR STATUS IN FIJI**



(Adapted from SEAR analysis, KII's. WHO GAP 2015 five strategic objectives and four Strategic Priorities 2022, TrACSS 2022 draft and 2019 IACG recommendations)

**Focus Area 1 – Leadership & Governance: Stepping up the Leadership for our AMR Response:** At 80% grading, The NARC is recognised under the Fiji Medicinal Products Act 2011, section 24 (1 to 7). NARC is required to finalise its governance structures, strategic and operational systems. NARC will strengthen its Quadripartite partnership using the One

Health Approach with One Vision; Aligning purpose of the five-line ministries and strengthen collaboration and engagement on Policies, Legislations and Regulations including Border Control. NARC is well functioning with soon to be gazetted six (6) Technical Working Groups (TWG). Update TWG terms of references (ToR). MHMS supports a National AMR Coordinator who provides secretariat support to NARC under the Essential Medicines Authority Team. NARC is required to update its ToR to reflect One Health Approach, governance and reporting requirements.

NARC will take lead to update and align legislations, craft Memoranda of Understanding (MoU) between all One Health participating line ministries and with Biosecurity Authority of Fiji (BAF) and Fiji Revenue Customs Services (FRCS). This will assist in importation (especially falsified AMs, animal feeds and growth promoters), control, licensing and investigations by 2024. Appropriate entry points for One Health against AMR will be identified, in order to establish technical, digital and information sharing alliance through these MoUs.

**Focus Area 2 - National AMR action plan 2015-2018:** At 80% grading, Current NAP was the first to be developed in the WHO Western Pacific Region and was endorsed in late 2015. NAP Annual Operational Plan was developed in 2016. NAP was aligned to GAP and WPRO Framework on Accelerated Action against AMR. Only 10% of activities fully implemented, 50% in progress, 40% did not commence at all. Plausible explanations were due to lack of funding and COVID-19 public health restrictions that were beyond NARC's control. There was no formal request to extend use of the 2015 NAP edition. NARC neither developed accompanying NAP Costing nor M&E frameworks.

Development Partners (DP) continued support for WHO-World Antimicrobial Awareness Week (WAAW), Department of Foreign Affairs and Trade (DFAT) supported Combat-AMR and EMAR to progress S01, S02 and SO 3. NARC will advocate and submit budget to Ministry of Economy and DPs funding for each fiscal year and Aid in Kind needs.

**Focus Area 3 - Awareness Campaigns: Public & training for professionals:** At 50% and is a Priority people-centric focus area for Fiji. *There is no National Strategic Health Communication and Community Engagement Plan for AMR.* Neither integration with other public health programs nor AH/EH programs conducted. Ad hoc activities with a flurry of community health education activities during World Antibiotic Awareness Week in November each year. AH sector animal husbandry team benefitted from EMAR project and conducted some health education activities to selected farmers. Need to strengthen integrated planning and co-sharing support to improve awareness and proficiency on antimicrobial stewardship (AMS) programmes and propose to mandate under Principal Act and Regulations, if not reflected.

Critical to link with AH and EH – zoonotic-Communicable Diseases (CDs) and climate sensitive infections with NCDs: Dengue, Leptospirosis, Typhoid, COVID-19, Monkeypox etc. Ensure good aseptic, IPC etiquette - personal, home, schools and workplace settings linked to Vaccination and Wellness Programs.

Education and training strategies for professionals: COMBAT-AMR Project enabled AMS trainings focussed on Antimicrobial Standard Treatment Guidelines (STGs) with 529 HH workers trained (Face to face/online) for maritime zone.

A One Health national workshop was conducted in 2019. EMAR - Training was also conducted. Critical to involve staff from the other five participating line ministries and selected Civil Society Organisations(CSOs) to deliver planned integrated AMR trainings.

**Focus Area 4 – National AMR Surveillance: Capacity Systems:** At 50% grading, priority focus area for Fiji. *National human AMR surveillance:* Knowing our AMR Burden for sector specific response. Surveillance is the cornerstone for assessing the spread of AMR. It is essential for informing policies and interventions, including diagnostic laboratory capacity, stewardship programmes, supply chain management, and infection prevention and control. Surveillance is also an indispensable tool for monitoring new emerging patterns of resistance and for evaluating the effectiveness of local, national and global containment and mitigation strategies. There is no current system, however, one of the aims of the COMBAT-AMR program (under NARC lead) is facilitating discussions in the AMR surveillance systems through the comprehensive situation assessment carried out at the beginning of the program. Fiji CDC has established surveillance systems but AMR is not always incorporated as routine surveillance.

*Integrated National Laboratory surveillance capacity strengthening:* Very limited, needs capacity development. HH data is generated but requires additional systems capacity development. **AH:**

BAF manages animal health AMC data and reports to the WOAH annually, unfortunately this data has never been requested for use by MoA nor MHMS.

National animal AMR surveillance capacity development is currently in progress. Urgent need to establish baseline data on AMR in pathogenic bacteria of animals, to understand zoonotic AMR risks associated with animals, and to identify trends in AMR.

The veterinary laboratory is unable to conduct regular bacteriology on clinical samples from animals due to supply instability of reagents. The laboratory is unlikely to be sustainable if it only tests clinical animal samples. Hence, it would be more efficient to collate all samples from a wider range of sources such as food, water quality and environmental bacteriology. A focus on developing a sustainable microbiology service within the veterinary diagnostic laboratory, by diversifying the source of samples tested by the microbiology laboratory, such as, service the culture, identification and AST of the following sources of samples: 1) Clinically ill and dead animals (milk, post-mortem samples). 2) Testing for zoonotic AMR risks under integrated surveillance - samples from healthy animals. 3) Food quality samples. 4) Water quality samples. 5) Environmental AMR surveillance samples.

*Early warning systems (EWARS) for AMR:* EWARS is in place for zoonotic and CDs. Explore inclusion of AMR with Fiji CDC in this phase as per EMAR and NDP strengthening.

**Focus Area 5 - Reduce incidence through good Infection Prevention & Control (IPC) practices:**

**At 60% grading, priority focus area,** strengthen IPC in all health care settings (AH and HH). Further advocate to changes in OHS Policy Act 2000 for Workplace Settings in AH and HH. Explore to accredit IPC as mandatory continued professional development for cadre annual practising license.

The updated national HH IPC Guidelines was launched in May 2022. Need to roll out integrated training and secure supply stability of IPC and Personal Protective Equipment (PPE) products. COVID-19 public health (PH) requirements endorsed all workplaces, farms, homes to be compliant. This was and can be a BIG WIN – cost-effective and high impact to improve AMR status in Fiji. Link with Ministry of Education, Heritage and Arts (MEHA) - Health Promoting Schools & School Health Programs - align to existing partnerships. No Multi-Year Plan (MYP) for immunisation in place. Vaccines Preventable Diseases Vaccines coverage 94%-99%. (*WHO Vaccines Monitoring System-2020*)

*WASH and vaccinations in community settings:* Water and Sanitation, Hygiene (WASH) and COVID 19 vaccinations uptake improved in community settings. However, continuity through targeted health education programs, engage Community Health Workers, CSOs, Zone Nurses and AH&EH officers to be trained and provide AMR related health education to their communities. Need to subsidise (PPE) for farmers and improve water quality and supply to rural communities and suburbia.

*Programme to promote IPC among the general population including farmers/food handlers:* Not implemented by NARC. MoA Animal Husbandry team has commenced with EMAR project.

*Standards for infection prevention and control for health care and food-based premises/institutions exist:* Standards in place and managed by the Food Unit, MHMS. Accreditation of formal food premises. Informal including hawkers, aware of requirements for compliance with Municipalities and Food Unit.

**Focus Area 6 - Antimicrobial Stewardship: Optimise use of AMs Human Health (HH) and Animal Health (AH):** **At 60% grading,** No National AMR Policy in place. Propose to be part of the NAP high level Activity - align using Health in All Policies (HiAP). Include AMR and One Health when updating NMPP, other strategic documents and legal frameworks.

*National Regulatory Authority (NRA) established and operational:* Recent review on Fiji National Regulatory Authority (NRA), with WHO Global Benchmarking with accreditation towards Maturity Level (ML) 1 by 2025. Antimicrobials (AM) Registration will commence from 2023. Improve proficiency in use of Msupply for NRA team and use mini-labs to test key AM quality. Regular capacity building and to train professionals in key ONE Health sectors including Fiji Consumer Council, promoting wise use of AMs in communities.

*Standard Treatment Guidelines (STGs) and Essential Medicines List (EML) in place for use:* Rheumatic Heart Disease (RHS) and AMs STGs in use. COMBAT-AMR intent on AMS and IPC - strengthening support since 2019. EML available online, may need to publish hard

copies for connectivity challenged areas. Training Plan not in place. AMR team to develop as part of NAP tasking and funding.

*Surveillance of antimicrobial importation, use and sales in humans and for Animal Use:*  
**Importation:** MoA issues import permit or prescription to farmers to import AMs for own farm use. BAF monitors antimicrobials requested, ensuring 100 percent compliance as to that approved by MoA. Large scale commercial farms, private veterinary clinics, semi-commercial and subsistence farmers rely on MoA. It is critical to monitor the importation of feeds containing critical antibiotics or antibiotics of human and animal health importance such as fluoroquinolones, linkages with border control and HH must be strengthened.

**Sale and Use:** MoA manages and monitors use of AMs by farmers at each request to minimise any risk of AMR occurrence. These include husbandry practices, total stock and condition of farms. MoA maintains a basic database on antimicrobial use (AMU) for animal health. MoA has twenty-two government veterinary clinics, that administer antibiotics when needed. Private veterinary clinics manage their own AMU records. Information is available at clinics but there is a need for collation of these raw data in order to at least show a true reflection of AMU in the country when it comes to livestock. These data can be shared with other sectors, if an integrated system is available.

**AM Consumption:** BAF manages AH AMC importation data and NARC to explore improving partnerships with BAF under the Biosecurity Act 2008.<sup>15</sup> Further strengthening of FRCS role via the Medicinal Products Act 2011, to mandate and develop regulations under the One Health Approach. **AH and EH** - To develop and integrate AMU surveillance systems (where possible) as part of the EMAR continuity and to regularise for all sectors by 2030.

*Supply stability of Antimicrobials - allows for first choice AMs to be prescribed:* Poor supply stability, national average 74% for all Essential Medicines. Eastern recorded the lowest at 69%. (Tuapaia IS). Improve data, AMC/WPCRASS initiatives from 2022 onwards. Review Procurement Supply Chain Management and to achieve >80% UHC (Fiji at 61% UHC Index) for all AM as per EML. Msupply roll out and users' proficiencies with regular monitoring by FPBSC and MoA/MoF-especially for AMs used for HH and AH - on tetra and in aqua settings. Link to FRCS and BAF to be aligned and strengthened with good data capture (surveillance) and synthesise for credible AMR intelligence for interventions and decision making. **AH:** There is no legislation to control the importation and use of antimicrobials in food-producing animals. AMR stewardship programme in health-care settings

*AMR stewardship programme in health-care setting:* Not regularly conducted due to funding and Covid PH restrictions. COMBAT-AMR supported six face-to-face and seven online trainings for 529 HH workers from 2019-May 2022. COMBAT-AMR will continue support up

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<sup>15</sup> <https://www.baf.com.fj/wp-content/uploads/2021/05/Biosecurity-Act.pdf>

to 2024. AH and HH sectors are encouraged to institutionalise as routine orientation for all sector employees and legal requirement to renew Annual Practicing License (Board and Professional Bodies) for registered AH/HH workers.

**Focus Area 7 – Ensure good governance & sustainable investment to combat AMR:** At 40% grading, priority focal area. No dedicated funding was requested by NARC as National Medicinal Products Board sub-committee. Grateful to FPBSC for supporting NARC activities since 2015. Strengthen partnerships and "Open Door" policy based on trust plus co-share commonalities in activities such as policies, training, monitoring missions. NARC to strengthen governance, coordination and share accountabilities.

*AMR at country level and the SDGs:* National AMR Coordinator in place, budgeted under FPBSC. AMR ratified as health priority agenda, requires more high-level visibility, not only during WAAW. Commit Improved surveillance for AMC/WPCRASS and GLASS reporting for 2022 data call in 2023. Preposition Quality Improvement Program. Fiji has adopted both WHO Access, Watch, Reserve (AWaRe) and Anatomical Therapeutic Chemical (ATC).

*AMR efforts has dedicated financing:* Advocate and submit for dedicated budget to fund Plan from Financial Year (FY) 2023. Develop Costing Framework using new WHO Costing Tool for NAP. EMAR and COMBAT-AMR Projects to submit transition plans at least 6 months before completion, transfer and ownership by MHMS. NARC and respective line ministry to advocate to Quadripartite and other DPs for support.

*Research, Development and innovation on AMR prevention and containment:* Not in place yet. FNU and HH conducted ad hoc KAP surveys and Quality Use of Medicines. Fiji Consumer Council conducted small customer survey on Doctor Shopping. Findings to be actioned, and enforce legislations. Academia and DP opportunity to support research and KAP surveys for transformational Policy changes. Fiji is not in a position to develop new antimicrobials including vaccines.

**Focus Area 8 – One Health Approach Initiative:** At 60% grading, priority focus, catalytic in ensuring other focus areas will be achieved. *Key ministries, public enterprises, development partners (DPs) and CSOs actively engaged and empowered under the One Health Approach to help in the control of AMR as stipulated in the NAP:* NARC - Current representation from EH/Forestry and Fisheries is uncertain. NARC Secretariat can proactively advocate to strengthen partnerships by identifying focal points from each sector, conducting orientations, trainings and situation analysis on AMR. MoA participation is good. DP dialogues for new support can be explored for the five underperforming focal areas. Engage CSOs through Fiji Consumer Council needs strengthening.

*One Health and AMR teams established in each sector: Animal, Environment and Health:* **HH:** Established under FPBSC/Essential Medicines Authority. National AMR Coordinator supported by MHMS - BIG WIN. **EH and AH:** Need to choose focal points who are committed and to work with HH Sector. Proposed to rebrand to One Health.

*A collaborative forum and framework for One Health spectrum to enhance efficiency and effectiveness:* Opportunity to market One Health NAP against AMR as priority health agenda and link up with IHR, Covid and NCDs for Government. Ratified in global and regional WHO meetings. Include NAP activities in respective sector budget submissions - both GoF and DP support.

**Focus Area 9 – Waste Management:** At 50% grading, high priority focus to implement urgently.

*Sanitation, sewage and waste effluent:* MWE responsible for safe water, proper sewage & waste effluent management in partnership with MHMS, Water authority of Fiji (WAF) and municipalities. Upgrading of water supply systems under GoF and ADB support critical and in progress.

*Effluent and waste from healthcare facilities:* Working with MHMS, MWE to ensure proper disposal from all healthcare facilities including use of incinerators, disposal of biological waste/clinical products and expired pharmaceuticals. Align to new National IPC Guidelines, edition 2022.

*Use of antimicrobials and manure in crop production:* All line ministries to liaise and coordinate proper waste disposal. Key partner BAF and FRCS in the importation and each line ministry to scrutinise permit issuances. Regularly meet to share information, collaborate and enforce Act.

*Release effluent and waste in animal production:* MoA and MWE to liaise strongly and coordinate proper disposal. Encourage use of Biogas fuel. Enforce training of farmers, compliance to guidelines and ensure proper drainage.

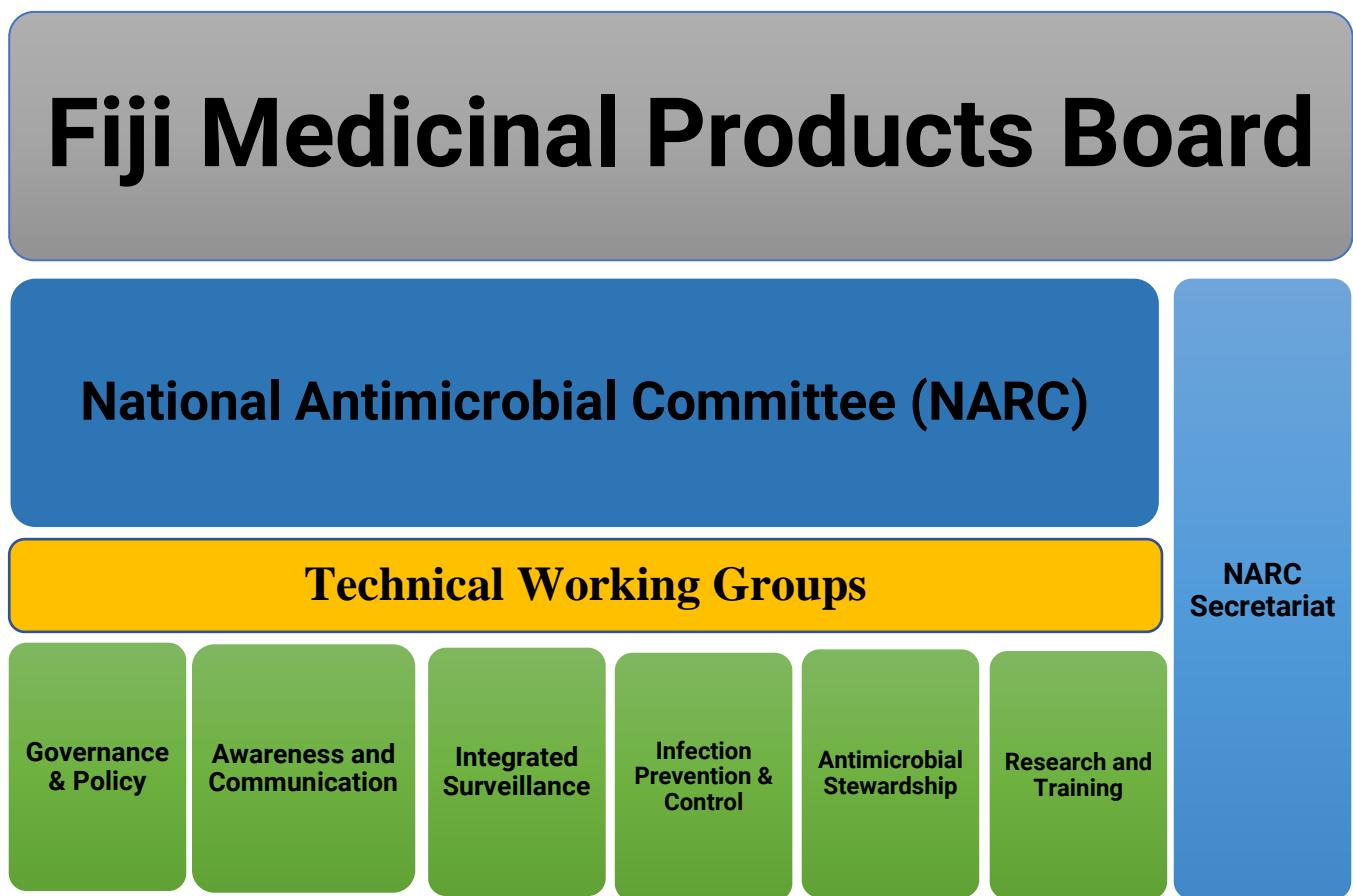
**Focus Area 10 – Monitoring and Evaluation plus Quality Improvement Program:** At 5% grading, high priority focus to implement urgently.

*M&E Framework to measure the progress of implementation and achieving Goals in managing AMR would be in Fiji:* Included in new workplan as Phase 2, develop national level M&E framework to measure progress against all NAP indicators. Develop mutually agreed indicators aligned to SDG, Regional and Local context and include in NSPs for each sector.

## 6. Governance Framework

The governance framework for the National AMR Committee is aligned to the established legal framework of the Government of Fiji. The National AMR Committee will report directly to the Fiji Medicinal Products Board as stipulated in the Fiji Medicinal Products Act 2011 section 24, see Figure 5. Key development partners and current external project teams such as EMAR and Combat-AMR are represented in respective Technical Working Group. Refer to Annex 1 for functions and membership of NARC.

Figure 5 – National Antimicrobial Committee Governance Structure



## 7. Strategic Intent

Our strategic intent is a One Health Approach initiative that was developed during the two days multisectoral Fiji National Antimicrobial Resistance Action Plan Review Workshop in June 2022. Representatives from all sectors aligned and harmonised respective strategic intent and mutually agreed on our Vision, Mission and Values to steer us to implement the NAP and contribute towards reducing the burden of AMR during this last decade of action.

### Vision

### ONE HEALTH FOR A BETTER FIJI

#### Mission

**Sustainable actions towards containing Antimicrobial Resistance in animal, environmental and human health sectors**

#### Values

Accountability

Collaboration

Excellence

Inclusiveness

Innovation

Integrity

Partnership

Professionalism

Sustainability

Trust

## **8. Budget and Monitoring and Evaluation Framework**

The costing of this plan will be linked to the Monitoring and Evaluation (M&E) Framework that will be developed in consultation with respective Ministries and development partners to facilitate execution over the five-year period. Each assigned ministry (except MHMS) is expected to identify an AMR focal point to be responsible for the implementation of the workplan agreed activities. The National AMR Committee Chair and Secretariat will facilitate the budgeting process and regularly report on the progress of the Plan to the National Medicinal Products Board and respective Health Executives.

The costing framework of the Plan will be linked to the M&E framework and developed in 2023 as part of the NARC submission to Cabinet for dedicated funding.

## 9. Strategic Workplan

| Strategic Objective                       | Description   |
|---|---|
| Global Action Plan Strategic Objective 1: | Improving awareness and understanding of antimicrobial resistance through effective communication, education and training   |
| Global Action Plan Strategic Objective 2: | Strengthen nationally coordinated and integrated surveillance system  |
| Global Action Plan Strategic Objective 3: | Reduce the incidence of antimicrobial resistance events in human, animal and environmental health through improved infection, prevention and control practices (and implementation of Wellness) |
| Global Action Plan Strategic Objective 4: | Optimize the use of antimicrobial medicines in human and animal health  |
| Global Action Plan Strategic Objective 5: | Establish and ensure governance, sustainable investment, innovation and actions to combat antimicrobial resistance using the One Health Approach  |

| <b>Global Action Plan Strategic Objective 1:</b> |   | Improving awareness and understanding of antimicrobial resistance through effective communication, education and training   |   |                                     |
|--|---|---|---|-------------------------------------|
|  |   | <b>National Action Plan Priority Areas:</b>   |   |                                     |
|  |   | Priority Area 1.1 Increase the number of communities trained on AMR using the One Health Approach by 20% in 2025  |   |                                     |
|  |   | Priority Area 1.2 Include One Health on Antimicrobial Resistance Concepts as a core component of professional education and train 600 sector health professionals in Animal (Veterinarians, Para-vets, fishery officers), Environment (Environmental and forestry officers) and Human Health Sectors (dentists, doctors, nurses, pharmacists and other allied health cadre) by 2025 |   |                                     |
| PRIORITY AREAS                                   | PRIORITIES AND ACTIVITIES   | TIMELINE  | RESPONSIBLE   | ACTIVITY OUTPUT INDICATOR           |
| PA 1.1   | <b>Increase the number of communities trained on AMR using the One Health Approach by 20% in 2025</b>   |   |   |                                     |
| 1.1.1  | Identify, develop and disseminate health education and strategic health clear terminology on antimicrobial resistance to be understood by all.  | 2022-2023   | <b>TWG Awareness &amp; Comms</b><br>TWG Research & Training | Terminology developed               |
| 1.1.2  | Develop, pre-test and endorse health education materials for target groups in all three languages (itaukei, Hindi and English), using mass media, paper based and digital/social platform as per market segmentation. | 2022-2023   | <b>TWG Awareness &amp; Comms</b><br>TWG Research Training   | IEC materials developed             |
| 1.1.3  | Support a consultant to develop a National Strategic Health Communication and Community Engagement on One Health Approach for Antimicrobial Resistance Plan (to include relevant output indicators)                   | 2022-2025   | <b>TWG Awareness &amp; Comms</b><br>WHO WOAH<br>FAO UNEP    | Plan developed and endorsed for use |

|  |        |  |           |  |   |
|--|--------|--|-----------|--|---|
|  | 1.1.4  | Support Consultation workshop with key stakeholders to develop a National Strategic Health Communication and Community Engagement Plan   | 2022-2023 | <b>TWG Awareness &amp; Comms</b><br>WHO WOAH<br>FAO UNEP         | Workshop conducted  |
|  | 1.1.5  | Support production of different modes of evidence-based community health education materials such as leaflets, brochures and posters, website, mass media - in partnerships with network providers and media organisations | 2022-2023 | <b>TWG Awareness &amp; Comms</b><br>WHO WOAH<br>FAO UNEP         | Health education Materials developed in three languages       |
|  | 1.1.6  | NARC to Identify and maintain annual calendar of annual events, public gatherings, and media opportunities in communities  | Dec 2022  | <b>NARC Secretariat</b> , Line ministries                        | Calendar of events maintained annually                        |
|  | 1.1.7  | Integrate AMR related activities with other Public Health Programs and participating ONE HEALTH Ministries, CSOs, Academia for Public outreach campaigns   | 2022-2025 | <b>MHMS</b><br>NARC, Line ministries                             | AMR related activities integrated in public health outreaches |
|  | 1.1.8  | Conduct six-monthly visits to target groups such as farmers, Abattoirs, health professionals with awareness to pertinent stakeholders, including animal husbandry, health professionals, traders                           | 2022-2025 | <b>NARC</b> , MoA, MoF   | Visits conducted  |
|  | 1.1.9  | NARC to propose a list and identify an influencer (appealing to all age groups) and with MoU   | 2022-2025 | <b>NARC MHMS</b>   | High-profile influencer secured                               |
|  | 1.1.10 | Formalise with non-governmental organizations, civil society organizations, religious organizations and the media to deliver messages on One Health Approach to reduce AMR Burden in Fiji                                  |           | <b>MHMS</b> , MoA, CCoF, NARC                                    | MoU signed  |
|  | 1.1.11 | Use social networking sites and groups to develop effective networks with appropriate groups to raise awareness on One Health Approach as means of reducing AMR burden   | 2023-2025 | <b>Awareness &amp; Comms TWG</b><br>MHMS and key line ministries | Continuous social media secured                               |

| PRIORITY AREAS | PRIORITIES AND ACTIVITIES   | TIMELINE  | RESPONSIBLE   | ACTIVITY OUTPUT INDICATOR                              |
|----------------|---|-----------|---|--|
| PA 1.2         | Include One Health on Antimicrobial Resistance Concepts (reference to Global Action Plan Strategic Objectives 2015) as a core component of professional education, and training for all sector health professionals in Animal, Environment and Human Health Sectors by 2025 |           |   |  |
| 1.2.1          | Develop an NARC AMR Training Manual (with One Health Approach to reduce AMR burden)   | 2022-2024 | <b>Training and Research TWG</b>                              | AMR training Manual updated                            |
| 1.2.2          | Finalise, endorse, upload on Fiji Guidelines Host and print copies of the NARC Training Manual  | 2024-2025 | <b>NARC</b><br>Training and Research TWG                      | AMR training manual uploaded and printed copies in use |
| 1.2.3          | Use AMR intelligence for “Fit for Purpose” health education for our communities and technical training for healthcare professionals by formalising One Health Approach and AMR with Academia  | 2022-2025 | <b>NARC</b> , Line Ministries,<br>MEHA,<br>WHO, USP, FNU, UoF | One Health and AMR included in updated curricula       |
| 1.2.4          | Formalise with relevant Ministries One Health Approach and Antimicrobial resistance as part of the continuous professional development (both public and private) for animal, environment and human health sectors.  | 2022-2025 | <b>NARC</b> , Line Ministries                                 | Number of certificates awarded                         |
| 1.2.5          | Formalise with relevant Professional Registration Boards and Professional Membership Bodies <sup>16</sup> One Health Approach and Antimicrobial resistance as MANDATORY continuous professional development required for Annual Practicing License.                         | 2022-2025 | <b>NARC</b> , Line Ministries                                 | AMR Related Training approved as core for APL          |

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<sup>16</sup> (Fiji College of General Practitioners, Fiji Dental Practitioners, Pharmaceutical Society of Fiji, Fiji Nurses Association, Fiji Veterinarians Association)

|                | 1.2.6                     | Organizing of in-service training for One Health on reducing AMR for all sectors e.g., use of Standard Therapeutic Guidelines (STGs), antibiotic protocols and infection control protocols   | 2022-2025        | <b>NARC Secretariat</b><br>Training Research TWG                                  | Training conducted                                |
|----------------|---------------------------|--|------------------|---|---|
|                | 1.2.7                     | Formalise submission to line ministries and higher education forum/academic curricular boards (administrative and ground work) to Incorporate One Health Approach and AMR in Early Childhood Education Primary, Secondary and Tertiary Institutions Curricular                                 | 2022-2023        | <b>Training Research TWG</b><br>MEHA, MWE, Waste Management Unit, CCoF, MHMS, MoA | One Health Approach and AMR submission endorsed   |
|                | 1.2.8                     | Engage an external consultant to assess and develop curricula for each academic stage and entry points for formal inclusion, collaborating with DPs and line ministries (includes workshops and mobility costs)  | 2023-2025        | <b>Training Research TWG</b><br>MEHA, MWE, Waste Management Unit, CCoF, MHMS, MoA | Curricular developed                              |
|                | 1.2.9                     | Partner with Secretariat of Pacific Community and FNU to start work towards post-graduate formal qualifications on One Health by 2030  | 2023-2025        | <b>NARC</b> , SPC, FNU, MHMS, MOA, MEHA   | Postgraduate in One Health preparations completed |
| PRIORITY AREAS | PRIORITIES AND ACTIVITIES |  | TIMELINE         | RESPONSIBLE   | ACTIVITY OUTPUT INDICATOR                         |
| PA 1.3         |                           |  |                  |   |   |
|                | 1.3.1                     | NARC to consult with Ministry of iTaukei Affairs, Chief Nursing & Midwife Officer and National Community Health Worker (CHW) Coordinator to develop a Cabinet Paper to include One Health Approach and AMR as a core component of CHWs responsibilities through health promotion and referral. | 2022-2023        | <b>Policy Governance TWG</b><br>Ministry of iTaukei Affairs (MTA)                 | Cabinet Paper endorsed                            |
|                | 1.3.2                     | Support a local consultant to develop training material and provide input in CHW reporting   | 2023- early 2024 | <b>Policy Governance TWG</b>  | Training Material developed                       |

|  |       |   |           |                                     |   |
|--|-------|---|-----------|-------------------------------------|---|
|  |       | format for CHWs on One Health Approach and AMR using local AMR intelligence and working with National TB and Wellness Programs etc.<br>*Includes mobility costs)        |           | MTA                                 |   |
|  | 1.3.3 | NARC representatives to participate in annual re/training of CHWs as planned by Nursing Division and Ministry of itaukei Affairs in 1,107 registered i-taukei villages. | 2023-2025 | <b>Policy Governance TWG</b><br>MTA | CHWs trained on One Health Approach and AMR |

| <b>Global Action Plan Strategic Objective 2:</b> |       | Strengthen nationally coordinated and integrated surveillance system   |   |  |   |   |                |
|--|-------|--|---|--|---|---|----------------|
|  |       | <b>National Action Plan Priority Areas:</b>  |   |  |   |   |                |
|  |       | Priority Area 2.1  | Contribute towards establishing a National One Health Reference Laboratory and integrated surveillance system in 2030                           |  |   |   |                |
|  |       | Priority Area 2.2  | Implement and strengthen Pharmaceutical Sector Antimicrobial Consumption surveillance capacities and Antimicrobial Usage in all sectors by 2025 |  |   |   |                |
|  |       | Priority Area 2.3  | Increase number of multisectoral microbiology laboratories conducting antibiogram tests by 10% in 2025  |  |   |   |                |
|  |       | Priority Area 2.4  | Increase number of multisectoral AMR related research by 10% in 2025  |  |   |   |                |
| <b>PRIORITY AREAS</b>                            |       | <b>PRIORITIES AND ACTIVITIES</b>   |   | <b>TIMELINE</b>  | <b>RESPONSIBLE</b>  | <b>ACTIVITY OUTPUT INDICATOR</b>                                | <b>REMARKS</b> |
| <b>PA 2.1</b>                                    |       | <b>Contribute towards establishing a National One Health Reference Laboratory and integrated surveillance system in 2030</b>   |   |  |   |   |                |
|  | 2.1.1 | Engage a Consultant with Fiji CDC, SPC, WHO to conduct assessment on Fiji CDC as a possible One health Reference Laboratory in Fiji for all sectors on AMR related surveillance  | 2024-2025   | <b>MHMS, MoA, WHO, SPC, COMBAT-AMR EMAR</b>                                      | Confirmation and one reporting system to the relevant authorities         |   |                |
|  | 2.1.2 | Support to strengthen basic microbiology laboratories capacities through training and procurement of consumables/reagents in collaboration with all sectors, establish referral pathways in-line with future One Health goals. | 2022-2025   | <b>Surveillance TWG</b><br>All sectors, MHMS, MOA, MWE, COMBAT-AMR, EMAR in Fiji | Micro laboratory staff trained to isolate and report the target organisms | Line ministries MoH and MoA to regularise for budget inclusions |                |

|  |       |  |                |   |   |  |
|--|-------|--|----------------|---|---|--|
|  | 2.13  | Develop a set of prioritised objectives for integrated AMR surveillance that target understanding AMR in different target populations/environmental compartments                               | 2022-2025      | <b>Surveillance TWG</b><br>MHMS, MOA, MWE<br>COMBAT-AMR EMAR      | Objectives developed and prioritised                        |  |
|  | 2.14  | Identify target bacteria for surveillance in the different target populations.   | 2022-2025      |   | Target bacteria for surveillance identified                 | Target Populations                     |
|  | 2.15  | Share and interpret surveillance results from the different sectors (with each sector having analysed the data from their sector).   | 2022-2025      |   |   |  |
|  | 2.1.6 | Support review and update of SOPs and foster greater liaison and coordination between laboratories in all sectors. This is in line with established national AMR surveillance laboratory plans | 2022-2025      | <b>Surveillance TWG</b><br>COMBAT-AMR EMAR                        | SoPs updated and clinical liaisons established              | SoP updated and endorsed               |
|  | 2.1.7 | Develop and test cost-effective methods to achieve integrated public health surveillance networks for AMR - to explore WHONet capacities and compatibility                                     | 2023-June 2024 | <b>Surveillance TWG</b><br>EMAR, SPC, COMBAT-AMR, WHO, WOAH, UNEP | Report on WHO Net effectiveness and compatibility submitted | WHO Net already in place in some PICTS |
|  | 2.1.8 | Explore approaches, including IT solutions, to share antibiogram/AMR data across sectors.to share AMR data, which will include computers, trainings, software development via ITC/IT Provider  | 2022-2025      | <b>Surveillance TWG</b><br>WHO, FAO, SPC, DFAT, COMBAT-AMR EMAR   | AMR Data Repository options explored for next phase.        | Completed Groundwork                   |
|  |       |  |                |   |   |  |

| PRIORITY AREAS | PRIORITIES AND ACTIVITIES   | TIMELINE  | RESPONSIBLE  | ACTIVITY OUTPUT INDICATOR                                 | REMARKS   |
|----------------|---|-----------|--|---|---|
| PA 2.2         | <b>Implement and strengthen Pharmaceutical Sector Antimicrobial Consumption surveillance capacities and Antimicrobial Usage in all sectors by 2025</b>  |           |  |   |   |
| 2.2.1          | Implement Antimicrobial Consumption/Western Pacific Regional Antimicrobial Consumption Surveillance System (AMC/WPCRASS) in public health sector and identify at least two (2) private sector wholesalers for pharmaceutical sector: 2021/2022 data call. | 2022-2025 | <b>FPBSC, EMAR, COMBAT-AMR Team, WHO EMAR</b>                            | AMC/WPCRASS implemented with data call submitted          | Administrative part in place 2021-2022. Data call for 2022 Use of Msupply system. |
| 2.2.2          | Develop template with ATC coding for 2022 Data Call in 2023   | 2022-2025 |  |   |   |
| 2.2.3          | Finalise and input Antimicrobials quality specifications including British/European/United States Pharmacopoeias standards and quantification on Msupply  | 2022-2025 |  |   |   |
| 2.2.4          | Review and update stock level (min and max) for core AMS  | 2022-2025 |  |   |   |
| 2.2.5          | Conduct training on AMC/WPCRASS with WHO and public hospitals   | 2022-2025 |  |   |   |
| 2.2.6          | Identify private wholesaler as pilot sites for AMC/WPCRASS  | 2022-2025 |  |   |   |
| 2.2.7          | Conduct AMU surveillance to understand the type of Antimicrobials (AMs) used and develop policies or consumer information on social media for different target populations in all sectors to help reduce misuse/abuse of AMs                              | 2023-2025 | <b>Surveillance TWG</b><br>Awareness & Communication TWG<br>AMS TWG EMAR | Evidence based policies and consumer information endorsed |   |

| PRIORITY AREAS |       | PRIORITIES AND ACTIVITIES  | TIMELINE      | RESPONSIBLE  | ACTIVITY OUTPUT INDICATOR                     | REMARKS   |
|----------------|-------|--|---------------|--|---|---|
| <b>PA2.3</b>   |       | <b>Establish and increase number of multisectoral microbiology laboratories conducting antibiogram tests by 10% in 2025</b>  |               |  |   |   |
|                | 2.3.2 | Support annual re/training of laboratory personnel in each sector on Antibiotic residue testing  | 2023-2025     | <b>Surveillance TWG</b><br>Research Training TWG<br>EMAR   | Training plan developed                       |   |
|                | 2.3.3 | Procure, supply and distribute adequate quality assured consumables and reagents for Antibiotic residue testing  | 2023-2025     | <b>EMA – Laboratory</b><br>Laboratory CSN  | Quantification and forecasting<br>Completed   |   |
|                |       |  |               |  |   |   |
| PRIORITY AREAS |       | PRIORITIES AND ACTIVITIES  | TIMELINE      | RESPONSIBLE  | ACTIVITY OUTPUT INDICATOR                     | REMARKS   |
| <b>PA 2.4</b>  |       | <b>Increase number of multisectoral AMR related research (in order to understand our AMR burden) by 10% in 2025</b>  |               |  |   |   |
|                | 2.4.1 | Support research based (Operational Studies, KAP Analysis etc) training for personnel from each sector (including academia) members every 2 years in partnership with WHO, SPC, FNU, USP   | 2023 and 2025 | <b>Research &amp; Training TWG</b><br>WHO, SPC, DFAT, USP,<br>COMBAT-AMR/MRFF,<br>EMAR, ACIAR/Donors | Research capacity building training conducted | Discuss with UNDP Pacific Global Fund Grant for support |
|                | 2.4.2 | Conduct total of twelve (12) priority AMR-related research studies across ONE Health Sectors endorsed by NARC Research & Training TWG (Operational Research, KAP Analysis, links to diabetes infections, waste management etc) in 2025 | 2023-2025     | <b>Research &amp; Training TWG</b><br>WHO, SPC, DFAT, USP,<br>COMBAT-AMR/MRFF,<br>EMAR               | Research conducted                            | 4 AMR related researches conducted per annum            |

|  |       |   |           |  |   |  |
|--|-------|---|-----------|--|---|--|
|  | 2.4.3 | Publish and Present Research findings to NARC at WAAW for AMR visibility as a high priority Health Agenda   | 2024-2025 | <b>Research &amp; Training TWG</b><br>WHO, SPC, DFAT, USP, COMBAT-AMR/MRFF, EMAR | Research published and presented                                      | 4 AMR related researches published per annum |
|  | 2.4.4 | NARC to review and prioritise recommendations from research outcomes and ensure implementation of priority recommendations to help reduce the burden of AMR in Fiji | 2024-2025 | <b>Research &amp; Training TWG</b><br>WHO, SPC, DFAT, USP, COMBAT-AMR/MRFF, EMAR | At most 50% of Cost effective/high impact recommendations implemented | (Including waste management)                 |

| <b>Global Action Plan Strategic Objective 3:</b> |                           | Reduce the incidence of antimicrobial resistance events in human, animal and environmental health through improved infection, prevention and control practices (and implementation of Wellness)     |   |                                    |   |
|--|---------------------------|---|---|------------------------------------|---|
|  |                           | <b>National Action Plan Priority Areas:</b>   |   |                                    |   |
|  |                           | Priority Area 3.1   | Strengthen and upscale Implementation of infection prevention and control programs across all sectors by 2025 |                                    |   |
|  |                           | Priority Area 3.2   | Incorporate One Health Approach in all Infection Prevention Control programs by 2024                          |                                    |   |
|  |                           | Priority Area 3.3   | Strengthen Infection Prevention Control audit systems across all sectors by 2025                              |                                    |   |
| PRIORITY AREAS                                   | PRIORITIES AND ACTIVITIES |   | TIMELINE  | RESPONSIBLE                        | ACTIVITY OUTPUT INDICATOR                     |
| <b>PA 3.1</b>                                    |                           | <b>Strengthen and upscale Implementation of infection prevention and control programs across all sectors by 2025</b>  |   |                                    |   |
|  | 3.1.1                     | Verify and consolidate as IPC related data repository collated from baseline surveys, IPC Situation Assessments and COVID IMT multiple audits conducted by COMBAT-AMR and MHMS.                     | 2022-2023   | <b>IPC TWG</b><br>NARC Secretariat | IPC Repository in place and accessed          |
|  | 3.1.2                     | Support feasible and high impact recommendations from baseline survey and IPC Situation Assessment (C-AMR). COVID IMT multiple audits Consolidate existing data.                                    | 2023-2024   | <b>IPC TWG</b><br>NARC Secretariat | 50% Recommendations implemented               |
|  | 3.1.2                     | Establish infection prevention and control program (guidelines, SOPs, competencies, training packages, standards) to align with baseline results in animal health, fisheries and environment health | 2023-2024   | <b>IPC TWG</b><br>NARC Secretariat | Guidelines, SoPs, standards produced          |
|  | 3.1.3                     | Strengthen linkages and engagement between IPC TWG and the vaccination program in Human Health  | 2023-2025   | <b>IPC TWG</b> Family Health       | Coverage >95% and information shared/reported |
|  | 3.1.4                     | Identify IPC staff at each level of health care facilities.   | 2022-2024   | <b>IPC TWG</b> NARC Secretariat    | Trained IPC officers                          |

|   |  | of health care facilities in all sectors |  |   |  |
|---|--|--|--|---|--|
| 3.1.5   | Secure trained animal health officer responsible for IPC in public and private veterinary clinics  | 2023 – 2025                              | <b>IPC TWG</b>                                 | Trained AH Officers                                   |  |
| 3.1.6   | Standardize IPC checklist based on the IPC guidelines across all health care levels both private & public facilities in animal and human health                        | 2023-2025                                | <b>IPC TWG</b>                                 | Standardized IPC checklist produced                   |  |
| 3.1.7   | Develop and standardize IPC audit tools for animal health  | 2023-2024                                | <b>IPC TWG</b>                                 | IPC Audit tools finalized                             |  |
| 3.1.8   | Premises business license renewal to incorporate IPC standards or equivalence in AH, HH, EH  | 2023-2025                                | <b>Policy and Governance TWG</b>               | Standardized IPC requirements for premises            |  |
| PRIORITY AREAS  | PRIORITIES AND ACTIVITIES  | TIMELINE                                 | RESPONSIBLE                                    | ACTIVITY OUTPUT INDICATOR                             |  |
| <b>PA 3.2</b> <b>Incorporate One Health Approach in all Infection Prevention Control programs by 2024</b> |  |  |  |   |  |
| 3.2.1   | Organize annual awareness sessions on One Health Approach on IPC through professional organisations with existing events such as WAAW or awareness activities calendar | 2023-2025                                | <b>IPC TWG</b><br>Awareness & Comms TWG        | Awareness session reports (M&E)                       |  |
| 3.2.2   | Organize awareness sessions to the community on One Health Approach on IPC through the Ministry of Rural Development   | 2023-2025                                | <b>IPC TWG</b><br>Awareness & Comm TWG<br>MMRD | Community awareness reports (M&E)                     |  |
| 3.2.3   | Finalise IPC TWG ToR - roles and responsibilities  | 2022-2023                                | <b>IPC TWG</b>                                 | IPC TWG strengthened                                  |  |
| 3.2.4   | Assess the current capacities and scope of existing risk management system using One Health Approach   | 31st July 2024                           | <b>IPC TWG</b>                                 | Assessment report                                     |  |
| 3.2.5   | Explore if report is feasible and suggest simple harmonised excel system or if can be added to WHO-Net   | 2025                                     | <b>IPC TWG</b>                                 |   |  |
| 3.2.6   | Incorporate IPC component during induction programs in HH through IPCOs  | 31st July 2024                           | <b>IPC TWG</b>                                 | Induction program training material/Induction reports |  |

|                | 3.2.7   | Trained IPC officer for AH to conduct induction training for newly appointed animal health officers   | 31st July 2024 | <b>IPC TWG</b> | Induction program training material/Induction reports |
|----------------|---|---|----------------|----------------|---|
|                | 3.2.8   | Trained IPC officer for Fisheries to conduct training for newly appointed staff (to intergrade into current management practices as set by FAO) | 31st July 2024 | <b>IPC TWG</b> | Induction program training material/induction reports |
|                | 3.2.9   | Develop IPC training modules for all existing technical personnel in AH, EH and HH  | 2022-2024      | <b>IPC TWG</b> | IPC training reports                                  |
|                | 3.2.10  | Present to relevant registering bodies for IPC as core competency for renewal of Annual Practicing License                                      | 2023-2025      | <b>IPC TWG</b> | IPC training endorsed as APL perquisite               |
|                | 3.2.11  | Support consultant to develop National IPC List and Guidelines for AH   | 2023-2025      | <b>IPC TWG</b> | Consultant TOR developed                              |
|                | 3.2.12  | Review and Develop National IPC Guidelines and IPC List for the animal health sector from the baseline survey results                           | 2023-2025      | <b>IPC TWG</b> | IPC Guidelines AH developed                           |
|                | 3.2.13  | Organize and conduct awareness and training on the developed National IPC guidelines and IPC list   | 2023-2025      | <b>IPC TWG</b> | Trainings conducted                                   |
| PRIORITY AREAS | PRIORITIES AND ACTIVITIES   |   | TIMELINE       | RESPONSIBLE    | ACTIVITY OUTPUT INDICATOR                             |
| PA 3.3         | <b>Strengthen Infection Prevention Control audit systems across all sectors by 2025</b> |   |                |                |   |
|                | 3.3.1   | Develop, pilot and endorse IPC audit systems for all sectors  | 2023           | <b>IPC TWG</b> | IPC Audit tool developed                              |
|                | 3.3.2   | Train IPC Coordinators to conduct regular IPC audits in workplaces  | 2023-2025      | <b>IPC TWG</b> | Training conducted                                    |
|                | 3.3.3   | Conduct regular IPC audits for accreditation and Quality Improvement Programs   | 2023-2025      | <b>IPC TWG</b> | Audit conducted                                       |

| <b>Global Action Plan Strategic Objective 4:</b>  |   | Optimize the use of antimicrobial medicines in human and animal health |                |   |  |
|---|---|--|----------------|---|--|
| National Action Plan Priority Areas:  |   |  |                |   |  |
| Priority Area 4.1: Update National Medicinal Products Policy and Develop One Health Policy by 2025  |   |  |                |   |  |
| Priority Area 4.2: Register all imported antimicrobials for use in all sectors with Fiji Medicinal Products Regulatory Authority in 2025                                |   |  |                |   |  |
| Priority Area 4.3: Contribute towards reduced rate on importation and use of antibiotics as growth promoters in food producing animal feeds by 20% each year up to 2030 |   |  |                |   |  |
| Priority Area 4.4: Strengthen Regulatory Framework using the One Health Approach by 2024  |   |  |                |   |  |
| Priority Area 4.5: Antimicrobial stewardship programmes implemented at the national and local level in all sectors in 2025  |   |  |                |   |  |
| Priority Area 4.6: Improve supply stability of prequalified antibiotics from 67% to at least 80% in 2025  |   |  |                |   |  |
| Priority Area 4.7: Develop or harmonise integrated systems for importation, use and waste management of antimicrobials by 2025  |   |  |                |   |  |
| Priority Area 4.8: Policies in place on the use and waste management of antimicrobials in all sectors by 2025   |   |  |                |   |  |
| Priority Area 4.9: Develop Antimicrobial List and Standard Treatment Guidelines for the Animal Health Sector by 2025  |   |  |                |   |  |
| PRIORITY AREAS  | PRIORITIES AND ACTIVITIES   | TIMELINE   | RESPONSIBLE    | ACTIVITY OUTPUT INDICATOR                   |  |
| PA 4.1 Update National Medicinal Products Policy and Develop One Health Policy by 2025  |   |  |                |   |  |
| 4.1.1   | Support consultant to review and update National Medicinal Products Policy-NMPP (link to One Health, International Health Regulations, Pharmaceutical Waste Management Policy) includes other costs | 2022-2023  | TWG AMS<br>WHO | National Medicinal Products Policy endorsed |  |

|                | 4.1.2                     | Support consultant develop National One Health Policy (link to NMPP, International Health Regulations, Pharmaceutical Waste Management Policy) includes other costs | 2022-2023   | <b>TWG AMS</b><br>WHO   | National One Health Policy endorsed           |
|----------------|---------------------------|---|-------------|---|---|
|                |                           |   |             |   |   |
| PRIORITY AREAS | PRIORITIES AND ACTIVITIES |   | TIMELINE    | RESPONSIBLE   | ACTIVITY OUTPUT INDICATOR                     |
| <b>PA 4.2</b>  |                           | <b>Register all imported antimicrobials for use in all sectors with Fiji Medicinal Products Regulatory Authority in 2025</b>  |             |   |   |
|                | 4.2.1                     | Register all ATC coded antimicrobials used in AH/HH sectors in the Msupply systems as stipulated in the Fiji MP Act 2011 and Scheduling Regulations                 | 31 Dec 2025 | <b>Fiji National Regulatory Authority</b><br><br>TWG Policy and Governance<br><br>TWG AMS | All AMs registered                            |
| <b>4.3</b>     |                           | <b>Contribute towards reduced rate on importation and use of antibiotics as growth promoters in food producing animal feeds by 20% each year up to 2030</b>         |             |   |   |
|                | 4.3.1                     | Regulate all importation of antibiotics in both human and animal Health, processes should be similar.   | 2022-2025   | <b>Fiji NRA</b><br><br>TWG GP/AMS   | Legislations and policies ratified            |
|                | 4.3.2                     | Move towards reducing importation of feeds containing critical antibiotics or antibiotics of human and animal health importance such as fluoroquinolones.           | 2022-2025   | <b>Fiji NRA</b><br><br>TWG GP/AMS<br><br>SG's Office                                      | Feeds banned as growth promoters              |
|                | 4.3.3                     | Consolidate all importation data (including retrospectively) for antibiotics in Fiji, includes animal and human health.   | 2022-2025   | <b>Fiji NRA</b><br><br>TWG GP/AMS<br><br>BAF FRCS MHMS                                    | Baseline data, integrated data base completed |

| PRIORITY AREAS | PRIORITIES AND ACTIVITIES  |  | TIMELINE  | RESPONSIBLE                                 | ACTIVITY OUTPUT INDICATOR                     |
|----------------|--|--|-----------|---|---|
| PA 4.4         | <b>Strengthen Regulatory Framework using the One Health Approach by 2024</b>                                   |  |           |   |   |
|                | 4.4.1  | Update legislation that all antimicrobials for animals to be prescribed for sale by registered veterinarians only            | 2022-2024 | <b>Policy Governance TWG</b><br>SGs office  | Relevant legislations ratified                |
|                | 4.4.2  | Present One Health Approach including AMS in Private sector by participating in Annual Seminars for each cadre               | 2022-2024 | <b>AMS TWG</b> NARC Secretariat             | One Health Approach/AMS presented             |
|                | 4.4.3  | Establish clear governance for AMS in local facilities and national by Governance TWG  | 2022-2024 | <b>Policy Governance TWG</b>                | Governance Structure established              |
|                | 4.4.4  | Develop regulations that covers antimicrobial use in veterinary services under the Fiji Medicinal Products Act 2011          | 2022-2024 | <b>Policy Governance TWG</b><br>SG's Office | Regulations ratified                          |
|                | 4.4.5  | Develop of policies which incorporate AMS as priority for Ministry Agendas link to 4.1.1 and 4.1.2                           | 2022-2024 | <b>Policy Governance TWG</b><br>SG's Office | Policies endorsed                             |
| <hr/>          |  |  |           |   |   |
| PRIORITY AREAS | PRIORITIES AND ACTIVITIES  |  | TIMELINE  | RESPONSIBLE                                 | ACTIVITY OUTPUT INDICATOR                     |
| PA 4.5         | <b>Antimicrobial stewardship programmes implemented at the national and local level in all sectors in 2025</b> |  |           |   |   |
|                | 4.5.1  | Support AMS training for all sectors - AH, HH, EH, MEHA (Baseline 592 persons trained-May,2022) Align to activities in SO1.2 | 2022-2025 | <b>AMS TWG</b><br>WHO DFAT                  | 600 technical persons trained over 3 years    |
|                | 4.5.2  | Include AMS PROGRAMS as quality assurance measures for Hospitals, including private facilities.                              | 2022-2025 | <b>AMS TWG</b>                              | Facilities awarded on AMS Excellence Programs |

|                | 4.5.3                     | Include AMS activities and reports as mandatory or part of agenda for NARC, National Medicines and Therapeutics Committee and Fiji Medicinal Products Board | 2022-2025 | <b>AMS TWG</b><br>NMTC FMPB  | AMS established as key agenda                       |
|----------------|---------------------------|---|-----------|--|---|
|                | 4.5.4                     | Develop AMS Audit Tool and audit AMS activities every 6 months  | 2022-2025 | <b>AMS TWG</b>   | AMDS tool endorsed and in use                       |
| <b>4.6</b>     |                           | <b>Improve supply stability of prequalified antibiotics from 67% to at least 80% in 2025</b>  |           |  |   |
|                | 4.6.1                     | Analyse consumption and epidemiological data to strengthen quantification and forecasting of all antimicrobials supply stability                            | 2023-2025 | <b>TWG AMS</b><br>FPBSC Essential Medicines Authority and Logistics Unit | AMs Supply stability improved                       |
|                |                           |   |           |  |   |
| PRIORITY AREAS | PRIORITIES AND ACTIVITIES |   | TIMELINE  | RESPONSIBLE  | ACTIVITY OUTPUT INDICATOR                           |
| <b>PA 4.7</b>  |                           | <b>Develop and harmonise integrated systems for importation, use and waste management of antimicrobials by 2025</b>   |           |  |   |
|                | 4.7.1                     | Develop a consolidated data base for AMC, AMU and wastage, interlink this to importation for use in human health  | 2022-2025 | <b>AMS TWG</b>   | baseline data, integrated data base                 |
|                | 4.7.2                     | Develop a consolidated data base for AMC, AMU and wastage, interlink this to importation for use in animal health   | 2022-2025 | <b>AMS TWG</b>   | baseline data, integrated data base                 |
|                | 4.7.3                     | Consolidate data collected in a central repository managed by assigned ministry/NARC Secretariat  | 2022-2025 | <b>AMS TWG</b><br>Surveillance TWG                                       | baseline data, integrated data base                 |
|                | 4.7.4                     | Re/Train staff to use and monitor data to better forecast procurement and review legislations   | 2022-2025 | <b>AMS TWG</b><br>Training Research TWG                                  | Supply stability and rational use of Antimicrobials |
|                | 4.7.5                     | Develop a consolidated data base for AMC, AMU and wastage, interlink this to importation for use in human health  | 2022-2025 | <b>AMS TWG</b><br>Surveillance TWG                                       | baseline data, integrated data base                 |

| PRIORITY AREAS | PRIORITIES AND ACTIVITIES  |           | TIMELINE  | RESPONSIBLE                                      | ACTIVITY OUTPUT INDICATOR |
|----------------|--|-----------|---|--|---------------------------|
| PA 4.8         | <b>Policies in place on the use and waste management of antimicrobials in all sectors by 2025</b>  |           |   |  |                           |
| 4.8.1          | Update legislation and/or develop regulations under the Fiji MP Act 2011/Environmental Management Act on the disposal of pharmaceutical products used in human and animal health | 2022-2024 | <b>Policy &amp; Governance TWG</b><br>SG's office | Updated legislations and policies endorsed       |                           |
| PRIORITY AREAS | PRIORITIES AND ACTIVITIES  |           | TIMELINE  | RESPONSIBLE                                      | ACTIVITY OUTPUT INDICATOR |
| PA 4.9         | <b>Develop Antimicrobial List and Standard Treatment Guidelines for the Animal Health Sector by 2025</b>   |           |   |  |                           |
| 4.7.1          | Regularly reconvene veterinary bodies, workforce and industry stakeholders to discuss on AMR and antimicrobial use in animal industry on a semi-annual basis                     | 2022-2025 | <b>AMS TWG</b><br>FAO WOAH WHO                    | Workshops convened                               |                           |
| 4.7.2          | Develop antimicrobial standard treatment guideline and National AM List for animal health use  | 2022-2025 | <b>AMS TWG</b><br>WOAH COMBAT AMR                 | Animal Health STGs and National AM List endorsed |                           |
| 4.7.3          | Support training of technical staff and selected farmers on AM List and STGs   | 2022-2025 | <b>NARC Secretariat</b><br>WOAH FAO               | Training conducted                               |                           |
|                |  |           |   |  |                           |

| <b>Global Action Plan Strategic Objective 5:</b> |                           | Establish and ensure governance, sustainable investment, innovation and actions to combat antimicrobial resistance using the One Health Approach  |             |   |                             |
|--|---------------------------|---|-------------|---|-----------------------------|
| <b>National Action Plan Priority Areas:</b>      |                           |   |             |   |                             |
| Priority Area 5.1:                               |                           | Formalise with memorandum of understanding (MoU) using One Health Approach on AMR as priority health agenda in all sectors in 2024  |             |   |                             |
| Priority Area 5.2                                |                           | Develop a Costed multi-sectorial national operational plan on AMR and One Health with a MEL Plan in 2023  |             |   |                             |
| Priority Area 5.3                                |                           | Build evidence and innovation to support the case of antimicrobial resistance as a priority Health Agenda using the One Health Approach in 2025   |             |   |                             |
| Priority Area 5.4                                |                           | Strengthen capacities to develop and enforce appropriate legal framework using the One Health Approach in 2025  |             |   |                             |
| Priority Area 5.5                                |                           | Identify suitable investment cases for AMR using One Health Approach in 2025  |             |   |                             |
|  |                           |   |             |   |                             |
| PRIORITY AREAS                                   | PRIORITIES AND ACTIVITIES | TIMELINE  | RESPONSIBLE | ACTIVITY OUTPUT INDICATOR                   |                             |
| PA 5.1   |                           | Formalise with memorandum of understanding (MoU) using One Health Approach on AMR as priority health agenda in all sectors in 2024  |             |   |                             |
|  | 5.1.1                     | Conduct High level advocacy in each line Ministry Strategic Plan and Policy for improved visibility and integrate One Health Approach to help reduce AMR and encourage Wellness in identified key strategic interventions | 2023-2025   | Line Ministries focal point<br>WHO FAO WOAH | One Health Approach adopted |
|  | 5.1.2                     | Formalise One Health Approach (as per new OH Policy) between all line ministries, BAF and FRCS  | By 2025     | Policy Governance TWG                       | MoUs signed                 |

|                |   |   |  | BAF FRCS SG's Office               |  |
|----------------|---|---|--|------------------------------------|--|
| 5.1.3          | Update NARC terms of reference to include One Health Approach and One Health TWG for National Medicinal Products Board endorsement  | 31-Dec-22   | <b>NARC Secretariat</b>                          | ToR updated                        |  |
| 5.1.4          | Formalise One Health Governance structure including TWGs under NARC   | 01-Jan-23   | <b>NARC FMPB</b>                                 | NARC Governance structure endorsed |  |
| 5.1.5          | National Medicinal Products Board to formalise appointment by gazetting new NARC members - tenure 3 years   | 2022-2025   | <b>NARC Secretariat FMPB</b>                     | NARC members appointed             |  |
| 5.1.6          | Support Capacity building for NARC & TWG members on Governance, One Health etc., to conduct capacity building in respective Ministry or Faculty.  | 2022-2025   | <b>NARC Fiji Medicinal Products Board</b>        | Capacity building complete         |  |
| 5.1.7          | Establish a dedicated budget line for the NARC secretariat and activities in the NAP under the One Health Approach for each line ministry (Commence groundwork in 2022, realise from FY2023 | 2022-2025   | <b>Policy Governance TWG FPBSC</b>               | Budget line secured                |  |
|                |   |   |  |                                    |  |
| PRIORITY AREAS | PRIORITIES AND ACTIVITIES   | TIMELINE  | RESPONSIBLE                                      | ACTIVITY OUTPUT INDICATOR          |  |
| <b>PA 5.2</b>  |   | <b>Develop a Costed multi-sectorial national operational plan on AMR and One Health with a MEL Plan in 2023</b> |  |                                    |  |
| 5.2.1          | Support Consultant to formulate an Annual operational plan AMR (2023-2025) with stakeholders  | 2022-2023   | <b>Policy Governance TWG</b><br>NARC Secretariat | NAP Operational Plan endorsed      |  |
| 5.2.2          | Consult NARC and sectors to develop a Monitoring, Evaluation and Learning Framework for the National Action Plan on AMR using the One Health Approach.                                      | 2023-2024   | <b>Policy Governance TWG</b><br>NARC Secretariat | M&E framework developed            |  |
|                |   |   |  |                                    |  |
| PRIORITY AREAS | PRIORITIES AND ACTIVITIES   | TIMELINE  | RESPONSIBLE                                      | ACTIVITY OUTPUT INDICATOR          |  |

| <b>PA 5.3</b>  |                           | <b>Build evidence and innovation to support the case of antimicrobial resistance as a priority Health Agenda using the One Health Approach in 2025</b>            |           |   |   |
|----------------|---------------------------|---|-----------|---|---|
|                | 5.3.1                     | Collate all evidence for AMR at local and regional level in Symposium (s) or regular forums   | 2022-2025 | <b>Surveillance TWG</b><br>WHO WOAH FAO UNEP            | AMR intelligence collected                      |
|                | 5.3.2                     | Improve access to best practice tools, apps to collect evidence and harmonize data systems in One Health  | 2022-2025 | <b>NARC</b> WHO WOAH FAO UNEP                           | Tools developed and endorsed                    |
|                | 5.3.3                     | Facilitate international technical collaboration and information sharing across regional and international partners   | 2022-2025 | <b>NARC</b> WHO WOAH FAO UNEP                           | Collaborations established                      |
|                | 5.3.4                     | Develop a website for NARC and One Health that enables real time access to credible and integrated AMR data, latest updates etc for/from all sectors link 1.1.2,3 | 2022-2025 | <b>NARC</b> WHO WOAH FAO UNEP                           | Website developed                               |
|                |                           |   |           |   |   |
| PRIORITY AREAS | PRIORITIES AND ACTIVITIES |   | TIMELINE  | RESPONSIBLE   | ACTIVITY OUTPUT INDICATOR                       |
| <b>PA 5.4</b>  |                           | <b>Strengthen capacities to develop and enforce appropriate legal framework using the One Health Approach in 2025</b>   |           |   |   |
|                | 5.4.1                     | Develop policies and regulations that enhance One Health Approach partnerships, activities implementation   | 2022-2025 | <b>Governance &amp; Policy TWG</b><br>WHO WOAH FAO UNEP | Legal framework updated                         |
|                | 5.4.2                     | Build NARC TWG capacities on Legal frameworks, policy & governance  | 2022-2025 | <b>NARC CHAIR</b> WHO WOAH FAO UNEP                     | NARC TWG members understanding legal frameworks |
|                | 5.4.3                     | Develop legal framework and harmonize compliance between sectors  | 2022-2025 | <b>NARC</b> WHO WOAH FAO UNEP SGs Office                | Legal framework updated                         |

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|                | 5.4.4                     | Initiative developing model legislation for One Health/AMR (as in other countries)  | 2022-2025 | <b>NARC</b> WHO WOAH FAO UNEP SGs Office          | Legal framework updated                          |
|----------------|---------------------------|---|-----------|---|--|
|                | 5.4.5                     | Consult, harmonise, update and submit to Cabinet, legal framework in all sectors key interventions that will enhance the ONE Health Approach on controlling and containing AMR  | 2022-2025 | <b>NARC</b> WHO WOAH FAO UNEP SGs Office          | One Health Approach adopted                      |
|                | 5.4.6                     | Develop and Provide tools and resources to enforce and monitor sections of updated legal frameworks under the One Health Approach.  | 2022-2025 | <b>NARC</b> WHO WOAH FAO UNEP                     | One Health Tools and resources endorsed and used |
| PRIORITY AREAS | PRIORITIES AND ACTIVITIES |   | TIMELINE  | RESPONSIBLE                                       | ACTIVITY OUTPUT INDICATOR                        |
| <b>PA 5.5</b>  |                           | <b>Identify suitable investment cases for AMR using One Health Approach in 2025</b>   |           |   |  |
|                | 5.5.1                     | Engage a consultant to conduct a comprehensive impact review and cost-benefit analysis using ONE HEALTH APPROACH on antimicrobial resistance in Fiji in 2024, as preparation for updating sector specific NSPs and new NAP plus investment case for dedicated budget lines. | 2023-2025 | <b>Governance Policy TWG</b><br>WHO WOAH FAO UNEP | Review completed                                 |
|                | 5.5.2                     | Review and identify priority investment cases for AMR using the One Health Approach Agenda for the next NAP cycle   | 2023-2025 | <b>Governance Policy TWG</b><br>WHO WOAH FAO UNEP | Investment Cases endorsed for funding            |

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## 10. Implementation Framework

### NAP Annual Operational Plan

Upon the adoption of the endorsed Fiji National Action Plan against Antimicrobial Resistance, the National AMR Committee will develop an annual Operational Plan up to 2025. This will include detailed activities linked to indicators and targets with responsibilities to help implement the parent Plan.

### Costing Plan and Monitoring & Evaluation (M&E) Framework

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

### Review and Evaluation

The Fiji National Action Plan against Antimicrobial Resistance 2022-2025 will be reviewed and updated before the end of 2025 after the planned impact analysis.

## Annexes

### Annex 1 – NARC Membership

**MEMBERSHIP:** Members will be appointed by the Fiji Medicinal Products Board as per Section 24 (2) of the Medicinal Products Act 2011. Tenure of three years. Members of the Committee will include the following representatives.

| Member  | Sector   |
|---|--|
| 1) Ministry of Health & Medical Services [MOHMS]  | Public Sector – Human Health                           |
| 2) Ministry of Agriculture [MOA]  | Public Sector – Animal Health                          |
| 3) Ministry of Waterways and Environment<br>4) Ministry of Fisheries<br>5) Ministry of Forestry<br>6) Ministry of Education     | Public Sector – Non health organizations               |
| 7) Fiji Pharmaceutical Society [FPS]<br>8) Fiji Veterinary Association [FVA]<br>9) Fiji College of General Practitioners [FCGP] | Private Sector – Animal and Human Health Professionals |
| 10) Consumer Council of Fiji<br>11) Fiji Crop and Livestock Council   | Consumers and Agricultural Industry                    |
| 12) Fiji Revenue and Customs Service [FRCS]<br>13) Biosecurity Authority of Fiji [BAF]  | Border Security  |
| 14) The University of the South Pacific [USP]<br>15) Fiji National University [FNU]<br>16) University of Fiji                   | Tertiary Academic Institutes                           |

**FUNCTIONS:** The functions of the Committee are to:

- a) Provide advice to the National Medicinal Products Board.
- b) Enforce the implementation of the National AMR Action Plan.
- c) Control antimicrobial resistance by advocating, facilitating and promoting programs related to surveillance, optimal antimicrobial use and infection prevention and control.
- d) Develop and recommend courses of action on national priorities to antimicrobial resistance in the National AMR Action Plan
- e) Establish Technical Working Groups (TWGs) responsible for reporting update of activities to NARC. NARC to appoint members of the TWGs.
- f) Coordinate strategies through TWGs to ensure the effectiveness of antimicrobial agents used in the treatment and prevention of infectious diseases in humans, animals, agriculture and environment.
- g) Create awareness and advise stakeholders and policy makers on matters relating to antimicrobial resistance.

## Annex 2 - Pictures



**World Antimicrobial Awareness Week Launch Event – 18 November 2021  
Fiji National University Pasifika Campus**



**World Antimicrobial Awareness Week 2021 Video and Poster Competition Winners**