



PAPUA NEW GUINEA



The Department of Health and Social Care (DHSC)'s Fleming Fund is a UK aid programme that supports up to 25 countries across Africa and Asia to tackle antimicrobial resistance (AMR), a leading public health threat globally. The Fleming Fund invests in strengthening surveillance systems through a portfolio of Country Grants, Regional Grants, and Fellowships managed by Mott MacDonald and Global Projects managed by DHSC partners.

Country Context

Papua New Guinea (PNG) began to work on AMR in 2015 and finalised its first National Action Plan (NAP) with support from the Fleming Fund in 2019. The NAP commits PNG to a One Health (OH) approach and was a joint effort by the National Department of Health (NDoH), Department of Agriculture and Livestock, and the Department of Environment and Conservation.

PNG's AMR NAP resulted in the establishment of robust AMR governance, One Health multisector collaboration, an annual AMR symposium, registration of PNG with WHO Global Antimicrobial Resistance and Use Surveillance System (GLASS), and training for fellows to provide sustainable leadership on AMR issues.

The PNG Country Grant in phase 2 aims to build on and maximise the impact of investments made to date by supporting the multi-stakeholder revision of the NAP for AMR. This involves consolidating surveillance toward an integrated OH system to produce data-driven decisions and policymaking and continuing to decentralise the AMR response and planning.



Phase 2 Country Grant – Expected Results



Support implementation of active AMR surveillance in poultry and the piloting of AMR surveillance in aquaculture.



National Agriculture Quarantine and Inspection Authority (NAQIA) is to report antimicrobial usage (AMU) data into the WOA and AMR surveillance data into the FAO.



Build improved surveillance capacity for laboratories to obtain core standards.



Revise the AMR NAP (2019-2023) for the 2024-2030 period.



Initiate Biosafety and biosecurity laboratory practices at National Animal Health & Food Testing Laboratory (NAHFTL)/NAQIA.



Develop the capacity for NAQIA to perform bacterial identification and Antimicrobial Susceptibility Testing (AST) of all relevant bacteria.



Develop an OH report on AMU and AMR and share with NAMRSC, other relevant stakeholders, via relevant media and technical platforms.



Upload of AMR data and analysis to GLASS system using WHONET.



Strengthen key AMR governance structures (NAMRSC, Secretariat, and TWGs) established.

Phase 2



Country Grant

Grantee: Burnet Institute
Value: £3,299,999
Duration: Apr 2024 - Dec 2025

Fellowships

No. of Fellows: 9
Host Institute: The Peter Doherty Institute for Infection and Immunity
Total value: £654,488 (across multiple countries, including PNG)
Total duration: Nov 2023 - Dec 2025

Regional Grants

(Across multiple countries, including PNG)

International Vaccine Institute
Regional Antimicrobial Resistance Data Analysis for Advocacy, Response and Policy (RADAAR)
Value: £1,999,956
Duration: Dec 2023 - Dec 2025

Liverpool School of Tropical Medicine
Gender, Equity and Antimicrobial Resistance Mainstreaming (GEAR up)
Value: £2,199,925
Duration: Feb 2024 - Dec 2025

International Vaccine Institute
Technical Assistance for Clinical Engagement Asia (TACE Asia)
Value: £1,882,436
Duration: Feb 2024 - Dec 2025

International Vaccine Institute
Capturing Data on Antimicrobial Resistance Patterns and Trends in Use in Regions of Asia (CAPTURA)
Value: £3,186,597
Duration: Oct 2023 - Dec 2025

Technical University of Denmark
External Quality Assessment of Laboratory Data Asia (EQAsia)
Value: £2,497,995
Duration: Nov 2023 - Dec 2025

University of Melbourne
The Asia Pacific Centre for Animal Health AMR and One Health South East Asia (AMROH SEA)
Value: £1,374,992
Duration: Jan 2024 - Dec 2025

International Vaccine Institute
Technical Assistance for Data and Evidence Use Asia (TADEU Asia)
Value: £1,687,091
Duration: Dec 2023 - Dec 2025

Strategic Alignment Grants

(Across multiple countries, including PNG)

Brigham and Women's Hospital
WHONET: Management and Analysis of Microbiology Laboratory Data
Value: £453,328
Duration: Mar 2024 - Dec 2025

Commonwealth Pharmacists Association
Surveillance and Prescribing Support for Antimicrobial Stewardship Resource Capacity Building (SPARC)
Value: £806,742
Duration: Mar 2024 - Dec 2025

Phase 1



Country Grants

Grantee: Burnet Institute

Sub-grantees: PNG Institute of Medical Research, the Pacific Region Infectious Diseases Association), the Infectious Diseases Department from Alfred Hospital, Beyond Essential Systems, and two resource partners: the Australian Animal Health Laboratories, and APCA Melbourn Veterinary School from the University of Melbourne.

Value: £7,729,230

Duration: Jan 2020 – Dec 2023

Fellowships

Number of Fellows: 8

Host Institution: The Peter Doherty Institute for Infection and Immunity

Value: £640,000

Duration: Nov 2019 - Jul 2023

Regional Grants

(Across multiple countries, including PNG)

International Vaccine Institute

Capturing Data on Antimicrobial Resistance Patterns and Trends in Use in Regions of Asia (CAPTURA SEA)

Value: £2,070,980

Duration: Jan 2019 - Sep 2023



Technical University of Denmark

External Quality Assessment of Laboratory Data Asia (EQAsia)

Value: £4,247,345

Duration: Jan 2020 - Oct 2023

International Vaccine Institute

Regional Antimicrobial Resistance Data Analysis for Advocacy, Response and Policy (RADAAR)

Value: £2,715,217

Duration: Sep 2019 - Nov 2023

Strategic Alignment Grants

(Across multiple countries, including PNG)

Brigham and Women's Hospital

WHONET: Management and Analysis of Microbiology Laboratory Data

Value: £889,044

Duration: Apr 2022 - Feb 2024

Commonwealth Pharmacists Association

Surveillance and Prescribing Support for Antimicrobial Stewardship Resource Capacity Building (SPARC)

Value: £1,152,946

Duration: Dec 2021 - Feb 2024

Foundation for Innovative New Diagnostics

FIND: Enhance Laboratory Capabilities, Data Visualisation, and Digital Health Platforms

Value: £2,586,227

Duration: Apr 2021 - Feb 2024



Phase 1 – Key Achievements



National AMR governance structure strengthened and supported through monthly TWGs and annual AMR symposium.



Supported laboratory refurbishment, provision of equipment, consumables, and reagents, and staff training.



Development of national AMR surveillance plan, antimicrobial consumption (AMC) and AMU surveillance plans, and finalisation of AMR surveillance plan in poultry.



Supported all laboratories to shift from recording microbiology results on paper to an electronic format to facilitate data sharing at the national level, starting with training.



Development of AMR surveillance standard operating procedures (SOP) and reporting templates



Strengthened and supported the function of the Pharmaceutical Services Standards Branch under the NDoH in the role of AMR Secretariat, which reports to the multisectoral NAMRSC.



Laboratory staff completed WHO biosafety training and microbiology skills competency assessment at the Central Public Health Laboratory (CPHL) and Port Moresby General Hospital.



Fellows completed the collaborative project, 'Assessing the Knowledge of One Health Concept in Key Sectors of Papua New Guinea' and are due to publish.



Implementation of laboratory management software at CPHL and use of SENAITE LIMS to aggregate AST data on GLASS pathogens from four surveillance sites.



The National Antimicrobial Prescribing Survey, the provincial AMR Network, and the PNG AMR Network Webinar were established and conducted by fellows.



Training materials and SOPs were developed, and staff were trained on data management, analysis, and interpretation.



Fleming Fellows' involvement in reviewing and drafting the National AMR Surveillance Guidelines and the Biosecurity Policy for PNG resulted in policy change, raising awareness on AMR and the importance of surveillance.



External Quality Assessment (EQA) is in place for peripheral surveillance labs.



Analysis of AMR data collected created a preliminary baseline and exemplified the use of data to understand and improve the facilities and testing practices.

43

43 training modules completed by national reference laboratory staff in laboratory microbiology. Biosafety manuals and biosecurity SOPs developed and endorsed by the NAHFTL/NAQIA.



The Fleming Fund

