

Fleming Fund Country Brief

December 2023

NEPAL



Who we are

The Department of Health and Social Care (DHSC)'s Fleming Fund is a UK aid programme supporting up to 25 countries across Africa and Asia to tackle antimicrobial resistance (AMR), a leading public health threat across the world. 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.

Focusing on low- and middle-income countries (LMICs), as they bear the heaviest consequences of the spread of drug-resistant infections, the programme generates, shares, and uses robust and quality-assured data to support AMR strategies and interventions.

Supporting AMR data collection and analysis, through a One Health approach across human clinical, animal, and environmental sectors will help improve patient health, inform health policies, and warn of emerging threats.



Country context

Nepal's national AMR landscape is well-developed. It was one of the earliest countries to formulate a National Action Plan (NAP) on AMR and a situational analysis of antibiotic use and resistance was conducted in 2015. The revised NAP (2021-2026) was developed with a One Health approach and approved and budgeted by an AMR technical working committee in 2022. The Ministry of Finance is reviewing the NAP to identify domestic funding and integrate AMR into budgets, as well as prioritising One Health AMR in Nepal's future health activities.

More information about Nepal and its work on AMR can be found on the Fleming Fund website at: <https://www.flemingfund.org/countries/Nepal>



Map of Nepal showing types of labs supported by the Fleming Fund

Country Grant

Grantee: FHI 360
Value: £5,076,234
Duration: Aug 2018 – Jun 2023

Fellowship Scheme

Number of Fellows: 12
Host Institution: The Doherty Institute
Value: £720,000
Duration: Feb 2019 – Jul 2023

Regional Grants

Grantees: International Vaccine Institute, Technical University of Denmark
Value: £9,675,386
Duration: Jan 2019 – Oct 2023

Country Grant

Management Agent: Mott MacDonald
Country Grantee: FHI 360

Enabling Nepal to establish a surveillance Technical Working Group to support the AMR multi-sectoral steering committee (AMRCSC) and sustain AMR surveillance in Human Health (HH) and Animal Health (AH), while expanding surveillance to the environmental sector.



Achievements



National AMR body, including technical committee and working groups in operation using a One Health approach.

23

laboratories supported, including **15** human health, **7** animal health, and a food testing laboratory.

2

National AMR reference laboratories refurbished and equipped to perform Antimicrobial Susceptibility Testing (AST) using automated systems in HH and AH. Reference laboratories provided national external quality assessments to surveillance sites for AST.

1 to 22 sites

increased number of sites reporting AMR data to WHO GLASS (Global AMR Surveillance System).



Nepal submitted AH antimicrobial consumption (AMC) data to WOAHA (World Organisation for Animal Health) for the highest level for data submission.



First systematic farm-level antimicrobial use (AMU) survey conducted in poultry farms.

16

First active and passive AMR surveillance conducted in Nepal's food sector on packaged food products of animal origin.



Surveillance, led by the food laboratory at Department of Food Technology and Quality Control (DFTQC) is developing protocols to establish passive AMR surveillance by including bacterial isolation and AST in routine quality control process.



Environmental sector engaged in AMR containment agenda, conducting assessments to identify data gaps and needs. Protocols developed to collect environmental samples for AMR surveillance, with plans to establish AMR unit in the laboratory at Department of Environment.



The national guidelines for Infection Prevention and Control developed, endorsed by Ministry of Health and Population.



Advocacy efforts led to Nepal Medical Council including AMR, AMSP and IPC on list of mandated competencies for medical interns in the country.



National antibiotic prescription guideline revised by the Ministry of Health and Population (MoHP) based on AMU data from PPS (Point Prevalence Survey) results.



Based on generated AMR data and AMU studies, Department of Drug Administration (DDA) issued public notice reiterating the prohibition of import and distribution of antibiotic, colistin for use in livestock, poultry, and aquaculture.



First time provincial action plan on AMR prepared by Lumbini Province with direct contribution from Fleming Fund Fellow and submitted to provincial ministry.



AMC data generation, supported by the Fleming Fund were reported to GLASS.

Fellowship Scheme

Management Agent: Mott MacDonald

Host Institution: The Doherty Institute

Professional Cohort I: AMR Laboratory, AMR Surveillance and AMU Surveillance in HH and AH

Professional Cohort II: AMU and AMC Surveillance in HH, and AMR Laboratory in AH

Policy Fellows: AMR Policy in HH and AH



Achievements



Training in whole-genome sequencing, molecular biology and PCR for sequencing technologies, AST, and advanced AMR phenotyping.



Formed One Health Committee for AMR with input from multiple cross sectors.



Conducted retrospective study on AMC data from Jan-Dec 2021 from the Western Regional Hospital.



Conducted studies on AMU within different provinces in Nepal and led AMR surveillance in poultry sector, including surveillance sites.



Provided capacity development training activities to laboratory colleagues.



Contributed to the National Action Plan, in coordination with the country grant.



Led AMR workshop in Nepal involving various stakeholders from different sectors to combat AMR issues collectively at both provincial and local levels.

Regional Grants

Management Agent: Mott MacDonald

Grantees: International Vaccine Institute (IVI),
Technical University of Denmark (DTU)

CAPTURA

Collection of Historical AMR Data – CAPTURA, IVI

Value: £2,712,824*

Duration: Jan 2019 – Feb 2023

Supports collection and analysis of historical AMR data across key Fleming Fund countries to provide early information for policymaking.



Achievements

91 AMR/AMU/AMU data sources in Nepal identified and **34** data-sharing agreements signed with facilities providing data.



Analysed data created preliminary baseline and exemplified data use to understand and improve facility's capacity (data management) and testing practices.

AMR and AMU questionnaires plus **36** rapid laboratory quality assessment (RLQA) conducted to verify data availability and grade data.

This process led to over

663,600

culture records, including **185,806** bacterial growths from 2016 - 2020.



In-country capacity-building support and technical assistance for data digitalisation, curation, warehousing, and analysis using software WHONET and Backlink.

Facilitated and supported development and piloting of mobile data-gathering platform 'EpiCollect' as AMU data collection tool in regional hospitals for routine AMU audit.



EQASIA

External Quality Assurance – Asia – EQASIA, DTU

Value: £4,247,345*

Duration: Jan 2020 – Dec 2022

Supports the development of external quality assurance practices in laboratories around Asia which ensures confidence in laboratory testing results.

RAADAR

Policy, Practice & Advocacy - RADAAR, IVI

Value: £2,715,217*

Duration: Sep 2019 – Nov 2022

Supports data sharing for global AMR planning and advocacy to provide policymakers with evidence to make robust, data-based policy recommendations.

14 countries

participating in building capacity in AST through EQAs to NRLs and Centres of Excellence.

The National Public Health Laboratory and the Central Veterinary Laboratory enrolled in EQASIA programme and participated in Proficiency Testing trials and capacity building training activities.



Nepal's National Public Health Laboratory (NPHL) and Central Veterinary Laboratory (CVL), national reference laboratories for AMR surveillance, enrolled in EQASIA and took part in proficiency testing trials and capacity-building training activities.

4 countries

including Nepal, developed pilot initiative to strengthen capacities in translating emerging AMR data/evidence for informed policy briefs, with Evidence-informed Policy Network (EVIIPNet).

4 regional analyses developed, including all Fleming Fund priority countries, to identify data-sharing bottlenecks.

Delivered both regional data and policy workshops to review existing material and visualisation approaches - developing plans to improve data sharing and analysis.



*(across multiple countries, including Nepal)

Strategic Alignment Grants

Management Agent: Mott MacDonald



Achievements

WHONET

Value: £596,768

Duration: Apr 2022 – May 2023

Supporting centralised WHONET training to countries.

Running centralised training (both on-site and remotely) and identifying gaps for specialist training in Fleming Fund-supported countries.

Developing training materials and providing ongoing technical support to software users.

Supporting the development of modules, including online data entry and integration platform compatible with DHIS-2, and providing scientific guidance for breakpoints (aiding pathogen AST) interpretation and report generation for AMR analysis.

FIND

Value: £2,329,777

Duration: Apr 2021 - Jun 2023

Supporting improvement of antibiotic prescription practices by reinforcing link between diagnostic and clinical practices.

Using digital tools to reduce time taken to clean AMR data received from surveillance sites, leading to more efficient HH and AH data analysis, and national-level reporting.

New opportunities for cross-sectoral AMR data use and interventions based on the collation of AH and HH AMR data in single repository.

In Nepal, a configurable AMR data cleaning and formatting tool was introduced, which analysts use to upload data to a One Health surveillance system.

Commonwealth Pharmacists Association

Value: £763,069

Duration: Dec 2021 – Sep 2022

Supporting improved surveillance and prescribing of antimicrobial medicines.

Commonwealth Pharmacists Association networks established in Fleming Fund-supported countries to provide HH & AH guidelines for uploading data sharing permission documents.

Identified clinical sites for point prevalence survey training which aligns with a sustainable model to ensure capacity in-country to undertake and support these studies in the future.

The Fleming Fund supports a range of additional projects delivered at national, regional, and global levels to support the generation, sharing, and use of high-quality AMR data. These all align closely with the country and regional grants and fellowships portfolio and support further achievement of the Fleming Fund objectives. A full list of global grants is available on the [Fleming Fund website](#).

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