

# Terms of Reference for FIND Regional Grant

## 1. Overview

Regional Grants are funded by UK Department of Health and Social Care under its Fleming Fund Grants Programme (<http://www.flemingfund.org/>). The aim of the Fleming Fund is to address critical gaps in surveillance of antibiotic resistance in low- and middle- income countries (LMICs) in Asia and Sub-Saharan Africa. Countries in these areas are set to bear the highest burden of antimicrobial resistant (AMR) infections. Led by the UK, political action against the problem has resulted in a roadmap for global response - the Global Action Plan on Antimicrobial Resistance (AMR)<sup>1</sup>. This is the blueprint for a multi-stakeholder global response to averting the burden of AMR. Mott MacDonald has been appointed as the Fleming Fund Management Agent and is responsible for the management of the Fleming Fund Programme of Country and Regional Grants and the Fleming Fellowship Scheme.

The Fleming Fund Grants Programme includes Regional Grants in each of the four Fleming Fund regions (West Africa, East and Southern Africa, South Asia and South East Asia), and consists of two rounds of grants, so far. Rounds 1 and 2 have already been tendered and a summary can be found in Annexes 1 and 2.

These Terms of Reference have been developed to guide FIND (hereafter the Grantee) develop a proposal for a regional grant to further support the Country Grants, which are entering implementation, by enhancing common quality approaches to laboratory quality management systems, bacteriology laboratory network design, collation and analysis of AMR surveillance data from various sectors and clinical engagement strategies.

The Grant is expected to last 15 months, beginning in December 2020, and will cover four workstreams outlined below. Some of the objectives may be incorporated into Country Grants, and FIND will need to work in close coordination with the Management Agent and will need to harmonise their proposal with the other grants under the Fleming Fund Grant Programme (Country Grants, Regional Grants Round 1 & 2 and the Fleming Fellowship Scheme), and also with national stakeholders in countries where FIND or their sub-grantees will operate.

## 2. Overview of the Fleming Fund

### 2.1. Introduction

The UK Government (Department of Health and Social Care) has established the Fleming Fund to respond to the global threat of antimicrobial resistance (AMR). The Fleming Fund is critical to achieving the resolution of the 68<sup>th</sup> World Health Assembly, 2015 (WHA A68/20), and in realising the 'Political Declaration of the High-Level Meeting of the UNGA on Antimicrobial Resistance, 2016'. These initiatives recognise that urgent cross sectoral rationalisation of antimicrobial use (AMU) and prevention and control of infections in humans, animals, food, agriculture and aquaculture sectors are key to tackling AMR, and call for: innovative research and development; affordable and accessible antimicrobial medicines and vaccines; improved surveillance and monitoring; increased governance on antimicrobial use; and increased international cooperation to control and prevent AMR.

---

<sup>1</sup> <http://www.who.int/antimicrobial-resistance/global-action-plan/en/>

The aim of the Fleming Fund Grants Programme is to improve the ability of recipient countries and regions to undertake surveillance and monitoring of AMR. This includes enhancing diagnosis of drug resistant infections, with an emphasis on antibiotics and priority bacterial diseases, and improving the quality, monitoring and reporting of antimicrobial resistance surveillance data.

The geographic focus of the Fleming Fund Grants Programme is low and lower-middle-income countries in four regions: **West Africa, East and Southern Africa, South Asia and South East Asia**. It provides financial support to participating countries via three funding channels, over a five-year period from 2016 to 2022:

- Country Grants to support implementation of National Action Plans for AMR
- Fleming Fellowship Scheme, providing continual professional development and leadership training opportunities for relevant fellows
- Regional Grants which provide support to Country Grants and improve the volume and quality of data

The UK Department of Health and Social Care has appointed Mott MacDonald Ltd as the Fleming Fund Management Agent for the Fleming Fund Grants Programme. Mott MacDonald is a global company with expertise in multi-sectoral international development and fund management. On behalf of the UK Government, Mott MacDonald is responsible for allocating funding, and for oversight of all investments made across the Fleming Fund Grants Programme. The Fleming Fund Grants Programme will be independently evaluated and Itad, a specialist evaluation firm, has been appointed for this purpose.

## 2.2. Core principles within the Fleming Fund Grants Programme

The Fleming Fund is built around four core principles. Grantees are expected to demonstrate how they will align with these principles during implementation of the grant.

- **Country Ownership:** The Fleming Fund Grants Programme will work closely with national governments to ensure that country plans and aspirations, as laid out in their National Action Plans, are implemented. The Programme will consult and work hand-in-hand with national governments to agree the approach and ensure sustainability. Grants and RFPs will conform to national priorities outlined in the National Action Plan and as articulated during Country Assessment visits. Unless there are good reasons to do so, Fleming Fund grants will chiefly invest in public sector laboratories and surveillance systems, thereby supporting national public health systems.
- **One Health:** The Fleming Fund recognises that the problem of AMR is a great danger to human health and cannot be controlled without a One Health approach. A specific set of One Health investment parameters has also been developed and is summarised below. This approach is aligned with key documents and guidelines from OIE and FAO as well as the Global Action Plan. The One Health investment parameters are:
  - Collaborative multi-sectoral governance of AMR: Leadership and resourcing of AMR surveillance and mitigation measures in all sectors that contribute to the emergence of AMR.
  - Integrated AMR and antimicrobial use and consumption surveillance in all sectors: Surveillance in humans, livestock, aquaculture, crops, food and the environment to produce information that is interpreted by multi-sectoral teams to help understand factors associated with AMR emergence within and between sectors

- AMR mitigation policies and programmes prioritised across multiple sectors: Evidence-based policies and programmes for AMR mitigation measures that are prioritised across the relevant sectors, based on information generated through AMR and AMU/C surveillance in all sectors.
- **Alignment of Approach:** The Fleming Fund Grants Programme will seek to invest in areas which complement and build on work done to date, rather than create new systems. Grant applicants will need to demonstrate that they understand other actors' work in the field of improved laboratory capacity (both within and outside the sphere of AMR surveillance), improved disease surveillance, and the One Health approach. The Fleming Fund Grants Programme will assess grants for duplication of efforts and/or the development of parallel systems. To the extent possible, prospective Grantees will need to demonstrate how their proposals add value to existing and planned investments and systems.
- **Sustainability:** The Fleming Fund Grants Programme will focus assistance on national systems with a view to long-term sustainability. Investment size and scope should, as far as possible, be aligned with national government spending so that systems created with Fleming Fund grants are sustainable within the public health system. We also recognise that the public good of conducting AMR surveillance means medium- to long-term support, and it is expected that countries which demonstrate good performance will have access to additional funds to provide ongoing support.

### **2.3. Problem statement to be addressed by the Fleming Fund at the regional level**

The two initial key areas of work that had been identified as priorities to be addressed by the Fleming Fund at the regional level include:

- Responding to data and evidence gaps to enhance appropriate use of antibiotics in LMICs (Round 1) and
- Establishing and sustaining regional mechanisms for supporting AMR surveillance efforts, for example, supporting external quality assessment, regional training in advanced diagnostics, or addressing barriers to regional data sharing and action (Round 2).

As outlined in WHO's global report on surveillance of antimicrobial resistance<sup>2</sup>, there are many gaps in information on antimicrobial resistance in pathogens of major public health importance. International standards on harmonisation of national antimicrobial resistance surveillance and monitoring programmes were adopted by OIE's members in 2012, but there are no internationally agreed standards for collection of data and reporting on antibacterial resistance in human health, and no harmonising standards across medical, veterinary and agricultural sectors.

As Country and Regional Grants are being implemented additional gaps and opportunities have been identified which would best be addressed by a regional approach. Four of them are outlined here.

#### 1) Laboratory quality management and accreditation pathways

Supported laboratories aim to be accredited for provision of diagnostic bacteriology but many will struggle to achieve this within the timeframe of the grant and will need additional technical support.

#### 2) Data aggregation and analysis

---

<sup>2</sup> <http://apps.who.int/iris/bitstream/10665/259744/1/9789241513449-eng.pdf?ua=1>

Although countries are attempting to analyse data from AMR surveillance in different sectors there are few tools that allow for aggregation of data from various systems.

### 3) Clinical engagement

Although recognised that clinical engagement, AMR stewardship and diagnostic stewardship programmes are necessary in order to change antimicrobial prescribing practices, it can be difficult to identify locally relevant barriers to collaboration between pharmacists, diagnostic laboratories and prescribers. In addition, once actions are put in place to change prescribing practices, they need monitoring in order to check their effectiveness, motivate staff, and to be able to apply corrective measures as necessary.

### 4) Laboratory networks

Current country grants have focused on strengthening a given, limited number of laboratories under the Ministries of Health and Agriculture. The choice of these laboratories has often been decided based on location of major hospitals, existing good quality laboratories, poultry population densities and political and practical reasons. To fully understand the information from surveillance, governments also need to understand the populations represented by surveillance in the context of the entire country. Due regard should therefore be given to population density and demography, and this should be a consideration when designating surveillance sites and / or when interpreting the data.

FIND have used network analysis to identify the most suitable locations to position TB diagnostic tools, and a similar approach could be used for the Fleming Fund to:

- use data to identify the best cities in which to support the development of bacteriology laboratories and those where a transport system would be most cost-effective.
- assess the network created by laboratories supported under the current country grants, to identify gaps and strengths.
- support governments to use this decision tool for their future planning.

### 3. Regional Grants Round 3 – workstreams

Table: Summary of workstreams, regions and sectors

Grant	Domain	Description	Region*		Sector		
			Africa	Asia	Human health	Animal health	One Health
1	Laboratory Quality Management	Scorecards to improve quality management in clinical and veterinary laboratories	X	x	x	x	
2	Data management.	Capturing, aggregating and analysing AMR surveillance data from various sectors.	X	X			x
3	Clinical engagement.	Identify strategies for clinical engagement and M&E tools of said strategies.	X	X	x		
4	Laboratory network development.	Strengthen bacteriology laboratory network design.	x	X	x	x	

**Workstream 1: Laboratory Quality Management Systems.**

The Grantee should address the following:

Objective / Output	Details
<b>Objective 1: Enhance capability of national AMR reference and site laboratories</b>	
Output 1.1: Baseline scorecard assessments completed for participating laboratories	As part of this activity, FIND will support the Ministry of Health (MoH) and Agriculture (MoA) in conducting assessments to determine laboratory readiness for AST, developing/customizing simplified QMS-based checklists for labs conducting AST and provide mentoring support to laboratories. Secondly, FIND will use the AMR scorecard and eTool (developed in collaboration with Becton Dickinson) to conduct a situational analysis of the AMR reference laboratories and sentinel site laboratories supported by the Fleming Fund.
Output 1.2: Mentorship and support programme developed and delivered, in partnership with the Country Grant	FIND will need to work with existing Fleming Fund Country Grants to develop a complementary support programme focusing on improving Quality Management for the key specimen types and organisms. In collaboration with the Country Grantee, FIND may also need to provide technical assistance to the AMR reference laboratory / Ministries of Health /Agriculture to develop EQA processes for the sentinel site laboratories.
Output 1.3: Follow up assessments completed demonstrating improved Quality Management for basic AMR testing	At the end of the mentorship programme, the scorecard assessments should be repeated to demonstrate improvements, and to identify gaps which could be addressed by further funding rounds.

This work builds on the Scorecard Programme previously developed by FIND.

The scorecard has the following objectives:

- a. Improve the appropriate use of diagnostics to identify pathogens and guide patient treatment and antibiotic stewardship
- b. Optimize surveillance and early detection of AMR at hospital level
- c. Initial focus on culture, identification & AST from blood, urine and faecal samples
- d. Leverage and align with existing tools and initiatives for AMR and lab quality improvement, e.g. SLIPTA/SLMTA
- e. Structured approach, including technical and quality systems elements and strengthening lab-clinical interface to ensure effective use of lab data to inform patient management and surveillance.

The Scorecard Programme for the Fleming Fund will be partly funded by Beckton Dickinson (BD) as part of the Central Procurement process, for sites receiving BD equipment.

In the proposal, FIND are asked to clarify which countries will be funded by BD, and which will require additional funding to be covered by this Grant. FIND will also need to work closely with the Country Grantees and BD to identify potential overlaps with Country Grant activities, to avoid duplication of effort or over-assessment of the sites.

The Scorecard Programme should be offered to both human health and animal health sites as per the modifications which have been developed in collaboration with Mott MacDonald.

---

**Workstream 2: Strengthening a One Health approach to data aggregation and use.**

This workstream aims to address challenges in collating data recorded in different software systems, owned by different ministries, across different sectors.

Some countries already have systems in place or in development as part of the Fleming Fund Country Grant, and FIND will need to work with the Management Agent’s regional teams to ensure there is no duplication of effort.

The pilot work for this has been completed in Zambia, funded by GAMRIF. We therefore ask that FIND propose two additional Fleming Fund countries to roll out the programme further and outline how they will develop the approach for each different context.

The proposal should address the following:

Outputs	Details
<b>Objective 2: Improving AMR surveillance data collation, management and presentation across sectors.</b>	
Output 2.1: Situation analysis.	Work with all ministries involved (Health, Agriculture, Fisheries, etc.) to identify IT infrastructure and systems used for AMR surveillance data management and analysis. Identify means by which the systems can become interoperable with the system/software that will be used for analysis and presentation at a central level.
Output 2.2: Implementation	Support automation of data collection and reporting in all sectors concerned, including installation of the middleware solution, configuration of the end to end data flows, design of indicators and dashboards and associated trainings.
Output 2.3: Data analysis capacity building.	In close collaboration with fellowships, regional grants and country grants grantees identify opportunities for capacity building of surveillance data analysis (animal and human health)

For this grant, and to ensure that needs of the animal health sector are well represented, we would like to discuss a partnership with a veterinary epidemiology consulting firm specialised, amongst others, in developing data collection, management and analysis tools for the animal health sector.

---

### **Workstream 3: Supporting Clinical Decision Making**

It is recognised that any improvements to laboratory services will be undermined unless laboratory users (in this case, predominantly doctors and veterinarians) are supported to use the laboratory results to improve their prescribing practices. In the first instance, increased clinical engagement with the laboratory can be demonstrated by an increase in sample throughput under the Fleming Fund.

Applications are invited to address the following:

<b>Outputs</b>	<b>Details</b>
<b>Objective 3: Improved support for clinical decision making</b>	
Output 3.1: Situation analysis	Undertake a situational analysis to understand the needs of clinicians and identify process improvements for strengthening the linkages between clinical practice and laboratory testing. This work should also investigate what decision making tools are already available and identify the barriers to their use. It should also consider the feasibility of any solution in specific country contexts (for example, the availability and costs of other laboratory results which might be used in a tool such as white cell count, C-reactive protein, virology results) and analyse the acceptability of such tools in particular contexts (for example, will use be sanctioned by government hospitals, are permissions needed, what seniority level should it be aimed at etc).
Output 3.2	Based on the situational analysis, the grantee should incorporate identified process improvements in its mentorship support and scorecard work to improve availability of results to clinicians.
Output 3.3	Also based on the situational analysis, the grantee should make a recommendation for future work on developing clinical decision software which could be used to support clinicians in improving antimicrobial prescribing.

In the proposal, the grantee should identify up to 4 countries in which this work will be piloted. The decision to develop a supporting tool will be based on the situational analysis and availability of existing tools (such as <http://www.microguide.eu/>) which could be adapted / incorporated into the programme, and the scientific evidence for use of the indicators proposed in the tool. The grantee should indicate, in the initial proposal, the estimated cost of developing a decision making tool based on their experience to date.

**Workstream 4: Laboratory network development**

This workstream aims to assist national governments in improving design of AMR surveillance networks. This programme will aim to adapt FIND’s work on TB, to develop a tool to support networking mapping and modelling which can be used to inform decisions on optimising coverage by a country’s laboratory network.

Initially, the tool will be applied to the veterinary and clinical laboratories in a limited number of countries (to be agreed with the MA during inception) currently supported by Fleming Fund Country Grants.

The objectives are to:

- Develop data-driven guidance on scenarios for scale up of AMR sentinel surveillance for human and animal health in different country settings, including key drivers of decision making around selection and placement of testing capacity and sample transport mechanisms to maximize surveillance coverage
- Inform operational planning
- Estimate projected future demand for testing based on current trajectory and optimal testing strategies and determine optimal capacity and placement of diagnostic capacity to meet future needs in a cost-efficient manner
- Use established country diagnostic network models to model future introduction of new diagnostics for AMR, including decentralized testing and expansion of referring facilities within the network
- Translate model-recommended network designs into evidence to inform National Action Plans for AMR
- Develop standardized methodology and build regional and country capacity to conduct network design and optimization analysis using user-friendly, open access software tool
- Inform global strategies for scale up of AMR surveillance and key decision drivers to consider in national and regional action planning

The proposal should address the following:

Output	Details
<b>Objective 4: To use network modelling to inform optimal design of laboratory networks for improved access and efficiency of testing to inform patient management and AMR surveillance.</b>	
Output 4.1: Baseline assessments of bacteriology networks and gap identification	<ul style="list-style-type: none"> <li>• In selected countries, conduct baseline analysis of diagnostic networks for human health (including testing sites and referring facilities) and existing device footprint and testing capacity, and assess the extent and distribution of under-utilized capacity.</li> <li>• In selected countries, conduct baseline analysis of diagnostic networks for animal health (including testing sites and referring facilities, e.g. poultry farms) and existing device footprint and testing capacity.</li> <li>• Map available country data on patient notifications and testing (with initial focus on blood cultures) and overlay with the existing network to understand gaps and opportunities for improved access and efficiency of the network using existing capacity.</li> </ul>

<p>Output 4.2: Estimate growth and future needs</p>	<ul style="list-style-type: none"> <li>• Estimate the growth in testing demand based on optimal testing strategies, and recommend phased network strengthening towards meeting future demand.</li> <li>• Estimate the growth in testing demand for animal health based on optimal testing strategy for poultry farms.</li> </ul>
<p>Output 4.3: Suggesting solutions, using various model scenarios.</p>	<ul style="list-style-type: none"> <li>• Assess alternative scenarios to meet the projected demand using the available device footprint and potential procurement of additional devices.</li> <li>• Model demand for pipeline diagnostic tests under different plausible testing strategies and design networks for different implementation approaches, such as testing at clinics and primary health care facilities, mobile testing and in the community.</li> <li>• Compare expected impact of various network designs and implementation strategies.</li> </ul>
<p>Output 4.4: Decision making using the tool and scaling up.</p>	<ul style="list-style-type: none"> <li>• Established national datasets and dynamic network models for human and animal health that can be interrogated for future scenarios for AMR testing</li> <li>• Use of model outputs to inform National Action Plans and implementation planning.</li> <li>• Develop a standardized methodology and build regional and country capacity for AMR diagnostic network design and optimization using a user-friendly, openly accessible software tool being developed by FIND and partners</li> <li>• Key considerations guidance document to inform other countries on strategies for scale up and key decision drivers to consider.</li> </ul>

The Grantee should propose 1-3 countries (at least one in the Africa region and one in the Asia region) in which to pilot the tool. The grantee may suggest an adaptation to the outputs outlined here above, according to country and given the time remaining for implementation.

## 4. Application requirement

### 4.1. Grant length, main deliverables and budget

Regional Grants Round 3 is planned for 15 months comprised of:

- **An inception phase** (1-2 months) to develop partnerships in the regions and plan/ coordinate with existing Fleming Fund grants (Country, Regional and Fellows). The inception phase will also be used to develop management plans, risk assessments, and workflow.  
The submission should budget in details cost for the inception phase, not to exceed £100,000.
- **Implementation** (12 months) of initiatives designed to address objectives outlined here above.  
Please include in the budget a one-line placeholder for operational costs (< £1 million) and full budget for all core staff.
- **Exit, analysis and reporting** (1-2 months) including a review workshop for each grant, to take stock of grant achievements and agree on the strategic direction and key next steps required to sustain these achievements.
- The expected start date will be December 2020.

### 4.2. Grant eligibility criteria

Potential grant applicants must satisfy the following eligibility criteria before applications will be assessed in detail. Applicants:

- Must demonstrate they are competent organisations responding to this call for proposals and able to respond to each of the tasks outlined in this Request for Proposal.
- We anticipate awarding up to eight grants to institutions or consortia that can respond to the needs outlined in section 3 in the regions specified. Where appropriate, applicants may apply for one or more grants in one or both regions. The grants available in each region are summarised in the table in section 3.
- Have the appropriate track-record in EQA strengthening, protocols development, capacity building, microbiology and epidemiology expertise, health economics, logistics / procurement and supply chains, and operating in the designated regions.
- Can be a single organisation, a partnership or consortium. Partnerships and consortia are required to ensure the skills and competencies match the grant applied for. Partnerships and consortia must clearly identify a Lead Grantee with the appropriate governance and coordination mechanisms to manage consortium members / sub-grantees.
- Organisations can be:
  - Academic institutes – such as a university or research institutes.
  - Non-Governmental organisations.
  - Private companies.
  - Government-owned enterprises or institutions, provided they can establish that they are (i) legally and financially autonomous, (ii) operate under commercial law, and (iii) are not dependent agencies of national governments.
- Must demonstrate the ability to work in the assigned regions.
- Should be willing and able to provide all information required for grant-assurance checks, including clear evidence of financial standing and systems of financial management and control.
- Should be able to provide evidence of suitability in the form of references from clients and donors for previous work undertaken within the last three years.
- Where the application is from a consortium, the Lead Grantee must be able to provide the same information and assurances for all sub-grantees.
- Use of local delivery partners as part of consortium bids will be viewed favourably in

terms of sustainability.

#### **4.3. Application process**

Organisations will be required to register their interest and to attend an online Applicant Information Session (AIS) of about two hours in duration. This will outline the process and key aspects of the application and is expected to be used by prospective applicants to judge their suitability to apply, above and beyond the eligibility criteria outlined above. The application form, budget and work plan template(s) will be released to registered applicants prior to the AIS. See 4.6 for key dates, times and deadlines.

#### **4.4. Evaluation criteria**

Evaluation criteria for grant applicants will be outlined in the application documents sent to registered applicants. Evaluation of submissions will be based on assessment of: organisational / consortium experience and capacity; personnel; technical and financial response to this RFP; alignment with the Fleming Fund principles of One Health, Sustainability, Country / Regional ownership, alignment of approach to national, regional plans and donors; and Value for Money.

#### **4.5. Restrictions/limitations**

Any conflict of interest, or potential conflict of interest, should be declared to the Management Agent when prospective grantees are registering their interest to apply for a Regional Grant. This will allow assessments and mitigation and does not necessarily preclude application. Conflict of interest declarations must include (but not be limited to) if applicants or their named personnel are already in receipt of Fleming Fund Grants or have applications under review, or if they have provided any service to the Fleming Fund (e.g. as advisory members, consultants, etc). If a conflict of interest, or potential conflict of interest, arises after that point, the prospective grantee must clearly declare this in their proposal document.

#### **4.6. Key dates**

Publication of Request for Proposals: 16/09/2020

Registration for applications: NA

Applicant Information Session: 28/09/2020 (or earlier if ready)

Proposal submission deadline: 29/10/2020

## Appendix 1                      Scope of Regional Grants Round 1

### Problem statement

There are too few datasets to support evidence-based policy and treatment, and to enhance appropriate use of antibiotics in LMICs. This lack of data is outlined in recent publications<sup>3</sup>. Although efforts to improve the quality and volume of data are being made, resources are required to improve the collection and collation of data, and to set baselines for specific priority drug/bug combinations outlined in the GLASS manual and the LSHTM roadmap, and that address local AMU. In addition, little information exists on resistance patterns against commonly used standard (and non-standard) treatments or those used in agriculture.

However, there are, in most countries, institutions (academic, research, public and private health facilities, etc) which have been collecting data on AMR, sometimes for decades. This data is simply inaccessible for use in large-scale analytics. Collecting and, where necessary, digitalising data from these institutions has the potential to provide a synergistic analytical power to undertake analysis of spatiotemporal trends and establish baselines of AMR across a wide range of pathogen/drug combinations. Likewise retrieving data on antimicrobial use through prescription data or volume of antibiotic consumption in healthcare facilities should provide a wealth of information for baseline data on AMU and potential drivers of AMR (at least for healthcare associated infection).

### Goal

The goal of Regional Grant Round 1 is to enlarge the body of data available locally, regionally and globally by including unreported data, so it does not need to include data or information from published articles, meta-analysis or other information in the literature. Potential data sources are raw data from clinical microbiology laboratories (e.g. isolate identification, % resistance), primary clinical data of bacterial infection and treatment, and grey literature (e.g. unpublished research data).

Aims of the Regional Grants Round 1 are to:

- Increase the volume of data available to improve spatiotemporal mapping of AMR and AMU across countries in each region, thus providing baseline data.
- Assess the quality of each dataset and provide meta-data to give regional and inter-regional context.
- Collect retrospective data from multiple sources in the public and private human healthcare sector, research and surveillance. This can include industry-led initiatives.
- Undertake analysis of the data and ensure it is disseminated locally, regionally and globally using appropriate platforms (e.g. online, peer reviewed publications).
- Improve local capacity to collect and use data at the national, regional, and global level by partnering with local institutions, including national Governments.
- Identify gaps in data from regions, considering whether this is as a result of low volumes of diagnostic testing or due to a lack of reporting of data.
- Identify areas of quality improvement and acknowledge issues with data interpretation that can be addressed in future standardisation of surveillance.

---

<sup>3</sup> World Health Organization: Worldwide country situation analysis: response to antimicrobial resistance. 2015. WHO/HSE/PED/AIP/2015.1 [http://apps.who.int/iris/bitstream/10665/163468/1/9789241564946\\_eng.pdf?ua=1&ua=1](http://apps.who.int/iris/bitstream/10665/163468/1/9789241564946_eng.pdf?ua=1&ua=1)

- Assist in improving awareness, advocacy and policy with a view to addressing the problem of AMR and AMU at the country and regional level.

Regional grants will also be required to conduct advocacy for improved data quality and submission of prospective data, and to report data at country level in a format useful for local policy makers.

## Appendix 2

## Scope of Regional Grants Round 2

### External Quality Assessment

This grant maps coverage, availability and uptake of EQA programmes in human and animal health laboratories. Barriers to participating in existing EQA programmes are being identified, and the grantee is exploring the risks and benefits of establishing formal regional EQA systems (e.g. biosecurity, data ownership, sample shipping) to complement existing international schemes, as these may be difficult for some countries to access. The grantee will then strengthen or help establish EQA Reference Centres. This will include formalising collaboration with all Fleming Fund Country Grants for establishment of a) quality assured identification of isolates and b) appropriate logistics for effective movement of isolates.

### Common surveillance protocols

This grant focuses on standardising the collection and analysis of data by developing common protocols. For data to be comparable, it must be collected in the same way. This is particularly challenging within animal health, aquaculture, environmental and food safety surveillance, as there are no international guidelines pertaining to AMR data collection.

The grantee has been tasked with identifying the most critical data protocols needed in either animal health, aquaculture or environmental sectors and then developing them. They will also support the roll-out of the Tricycle Protocol in some Fleming Fund priority countries.

### Microbiology training; epidemiology training

Under this grant quality microbiology and epidemiology training is being delivered to laboratory and surveillance staff from national reference laboratories (human, animal and environmental health). This includes laboratory and data management and advanced laboratory skills.

Training in AMR epidemiology and surveillance methods will be provided for human, animal and environmental health laboratories and/or national coordination centres for AMR (e.g. AMR Coordination Committee or Technical Working Group(s)).

### Improving data analysis and sharing

This grant provides support to regional bodies for data sharing and policy-relevant analysis for both human and animal health. The grantee is working with the regional bodies to identify policy bottlenecks around data sharing for regional analysis, and to assess which approaches to data collection and analysis would be most beneficial for policy discussions. Regional plans will be developed to improve data sharing and analysis and to identify an optimal number of reference laboratories to obtain quality data to inform regional analysis.

### Understanding barriers to logistics, imports and exports, and supply chains.

### Improving regional capacity for whole genome sequencing.