



Department
of Health &
Social Care

Fleming Fund Annual Review: January to December 2020

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Abbreviations List

AMC	Antimicrobial consumption
AMR	Antimicrobial resistance
AMS	Antimicrobial stewardship
AMU	Antimicrobial use
ATLASS	FAO Assessment Tool for Laboratories and AMR Surveillance Systems
CwPAMS	Commonwealth Partnerships for Antimicrobial Stewardship
DHSC	Department of Health and Social Care
ESBL	Extended Spectrum Beta-Lactamase
EQA	External Quality Assurance
FAO	Food and Agriculture Organization
FIND	Foundation for Innovative New Diagnostics
GHS	Global Health Security
GLASS	Global Antimicrobial Resistance Surveillance System
GRAM	Global Research on Antimicrobial Resistance
IDC	Indirect Costs
LMIC	Low- and middle-income country
LSHTM	London School of Hygiene and Tropical Medicine
MEL	Monitoring, evaluation and learning

MPTF	Multi-Partner Trust Fund
M&OH	Management and overhead
NAP	National Action Plan
NHL	National Health Laboratory
ODA	Overseas Development Assistance
ODI	Overseas Development Institute
OIE	World Organization of Animal Health
RFP	Request for Proposals
SA/CSA	Sustainability Analysis/Comprehensive Stakeholder Analysis
SF	Substandard and Falsified
TAG	Technical Advisory Group
ToC	Theory of Change
UN	United Nations
VDL	Veterinary Diagnostic Laboratory
VfM	Value for Money
WGS	Whole Genome Sequencing
WHO	World Health Organization

Summary and overview

Project Title: Fleming Fund Annual Review

Project Value (full life): £265m

Review period: January 2020 to December 2020

Project's Start Date: 2016

Project's End Date: 2022

Summary of Programme Performance

Year	2018	2019	2020
Programme Score	A/G	A	A (against FCDO scale)

Outline of project

By 2022, the Fleming Fund will have helped up to 24 low- and middle-income countries (LMICs) to establish the foundations of sustainable surveillance systems for AMR and antimicrobial usage (AMU) through a portfolio of [country grants](#), [regional grants](#), and [fellowships](#). We also provide support to a significant number of additional LMICs through [global projects](#). The majority of the fund's work is delivered through our Management Agent, Mott MacDonald, with other delivery partners including the Tripartite (World Health Organization (WHO), Food and Agriculture Organization (FAO) and the World Organization for Animal Health (OIE)), and a series of specialised grants.

The expected outcomes from this programme include an increase in relevant, high-quality data being shared nationally and globally. This would provide the basis for changes in policy and practice to increase the rational use of antimicrobial medicines and reduce the number of drug resistant infections.

The Fund aims to improve laboratory capacity and diagnosis as well as data and surveillance of AMR at a country level through a One Health approach, covering human health, animal health and agriculture. By supporting countries in South and South-East Asia and sub-Saharan Africa to develop One Health AMR National Action Plans (NAPs) and implement the surveillance aspects of these, the programme supports delivery of [2015 World Health Assembly Global Action Plan objectives](#), the UK's [2016 O'Neill Review on AMR](#), the [Inter-Agency Coordination Group on AMR](#) recommendations, as well as the

[UK's own AMR NAP 2019 - 2024](#). Contributions to these key international objectives and outcomes are captured in the Theory of Change (ToC), but in particular Fleming Fund outputs contribute to the following Global Action Plan outcomes:

- improved awareness and understanding of AMR
- strengthened knowledge through surveillance and research
- ensured sustainable investment in countering AMR
- optimised use of antibiotics

The Fleming Fund also contributes to broader work on health systems strengthening in LMICs by supporting improvements to diagnosis, surveillance and use of quality health data in decision making. These actions contribute to improved health information systems, laboratory strengthening and help to ensure that essential antimicrobial medicines are safe and effective.

Summary of progress and supportive narrative for the overall score in this review

The Fleming Fund has maintained good progress against the majority of outputs, and exceeded against two of the ten. This is a significant achievement given that the model had to be shifted online, and many health practitioners in-country were diverted to the COVID-19 response. The programme has successfully adapted where possible and pivoted to support the response in multiple countries, which is not captured by the outputs. This has included sharing laboratory resources, supporting efforts to improve infection, prevention and control, and enabling access to whole genome sequencing for COVID-19 variants in Africa.

Flexing to support COVID-19: Whole Genome Sequencing

The [Whole Genome Sequencing \(WGS\) Regional Grant](#) is designed to upgrade WGS capability for bacterial AMR across Africa through support to regional centres in Tanzania, Nigeria, South Africa and Ghana. The majority of WGS equipment and training can also be used in the COVID-19 response as it is disease agnostic. In response to COVID-19, gaps in capacity to conduct WGS for COVID-19 were noted by the Fleming Fund following consultation with key stakeholders, including Africa CDC. The value of the WGS for supporting Public Health action was set out by the WHO in March 2020 "Laboratory testing for coronavirus disease (COVID-19) in suspected human cases" Interim Guidance WHO" The Fleming Fund approved the use of Fleming Fund equipment and additional funding in

July 2020 to sequence up to 1,000 COVID-19 samples from Fleming Fund priority countries and beyond.

This is an example of flexible, responsive support by the Fleming Fund which also promotes value for money (VFM) of the WGS Regional Grant, as the number of samples tested overall should increase and be immediately useful. Providing sequencing support to the COVID-19 response is an opportunity to boost Africa's WGS capabilities and to accelerate the use of WGS across Africa which benefits work to tackle AMR.

(Source: Itad third formative deliverable)

There have been a number of key achievements this year, including:

- growing the programme to cover 22 active country grants, an increase from 132 to 240 labs supported (surpassing expectations by 64 labs),
- an increase from 125 to 133 countries submitting quantitative data to OIE database on use of antimicrobials intended for use in animals, and 73% (14 of 19) of Fleming Fund countries now submitting data into WHO's Global AMR Surveillance System (GLASS) up from a baseline of 10.5% (2 of 19) in 2017.
- In terms of awareness and advocacy of the Fleming Fund and the issue of AMR, traffic to the Fleming Fund website increased with an average of 1596 new visitors each month.

Where milestones have not been met, this has largely been due to travel restrictions halting progress, or key Ministry of Health stakeholders being diverted to the COVID-19 response in country. This has also meant that progress on some of the fellowships programmes has had to be paused.

Demand is growing for the data countries are producing through Fleming Fund activity, both internationally and across UK government. There is a focus in UK's G7 presidency on tackling AMR and supporting surveillance systems for pandemic preparedness. New global governance mechanisms have been launched by the Tripartite United Nations (UN) agencies with a key role for the UK's Special Envoy on AMR, and the UK has become a key early contributor to the new UN AMR Multi-Partner Trust Fund (MPTF) through the Fleming Fund. Whilst challenging fiscal circumstances mean that ambitions for a second phase of the programme beyond 2022 (also known as Phase II) cannot be launched until the next Spending Review, this transition to a potential Phase II of the programme is expected to see an acceleration of results and outcomes from the groundwork laid over the past two years.

Progress against recommendations from the last review

	Recommendations	Section	Met/Partially Met/Not Met
1	Agree stretching year 3 milestones for the monitoring matrix by end March 2020 - DHSC + Mott MacDonald	Project Management	Met.- Output indicator milestones were updated in March 2020
2	Agree set of mitigation measures to improve Mott Macdonald forecasting and financial performance. Owner: DHSC + Mott MacDonald	Finance	Partially met. Despite a concerted effort by Mott MacDonald, COVID-19 impacted delivery and forecasting
3	The Fleming Fund portfolio risk register currently uses a 5 by 5 risk matrix for likelihood and impact The Global Health Security (GHS) Programme Board have just received approval for their revised risk strategy which uses a 4 by 4 risk matrix. The Fleming Fund will review the difference and consider aligning. Owner: DHSC	Risk Management	Met. Following a further review, GHS Programme Board reverted to using a 5 by 5 Matrix
4	Consider developing an overarching Fleming Fund logframe that can track progress against the revised ToC, the revised GHS ToC (pending), and which can crucially measure contribution to outcomes. This may have to be something that is developed for a future Phase II of the programme. Owner: DHSC + Mott MacDonald + Itad	ToC	Not met. Given the complexity of the programme and varied stages the different projects are at, it was always the intention to develop a portfolio wide logframe at the point of a Phase II. However, preparation for a phase II was postponed to 2021.

	Recommendations	Section	Met/Partially Met/Not Met
5	Commission Software to update the Fleming Fund website and fix programming issues to ensure more information is available to key country stakeholders including the original request for proposals, country one-pagers, and map of sites supported.	External Engagement	Partially met. development work has been carried out on the website to ensure information about the programme is communicated effectively. Some specific actions included in this recommendation are still outstanding but are scheduled to be completed in Q1 2021.
6	Host 2020 Delivery Partners Meeting in Africa, building on the feedback from partners at the Laos event. Owner: DHSC	External Engagement	Partially met. Due to the COVID-19 pandemic, it was not possible to host the Delivery Partners Event in person. Instead, a successful virtual event was held in in October 2020.
7	There are clear mechanisms in place to identify and review high management and overhead (M&OH) costs. Indirect costs should also be closely reviewed as part of the rollout of the second-round country grants – with a particular focus on those grantees which are outliers and have multiple grants where economies of scale can possibly be sought. Owner: DHSC + MM	VFM	Partially met. The Review has been extended to all Delivery Partners and grantees. The opportunity to renegotiate M&OH costs was not available in 2020 for the most part.
8	Consideration should be given as to the mechanisms available for gathering metadata, that will help identify the extent to which surveillance data is being appropriately collected from all groups (socio-economic, geographic and gender), reflective of the burden of AMR. Owner: DHSC	VFM	Met. A full report has been produced

	Recommendations	Section	Met/Partially Met/Not Met
9	That clear statement on Equity in the Fleming Fund is developed, this would be underpinned by overarching objectives, to which grantees can work towards. It would help in setting out how benefits from investments can be equitably distributed during Phase II, which is when the programme will be much closer toward delivering health outcomes. Owner: DHSC	VFM	Not met. This recommendation was not taken forward in 2020 due to wider priorities, including adaptation and flexing to COVID-19. This recommendation will be taken forwards as part of Phase II design.
10	The Fleming Fund team should consider potential mechanisms available for capturing the extent of the Fund’s contributions toward outcomes (policy changes/health outcomes) in future Funding cycles/investments beyond the current phase. Owner: DHSC	VFM	Partially Met. Mott MacDonald’s ongoing work implementing the "Managing for Effectiveness Review" will provide a strong basis for achieving this objective. Phase II preparations were postponed. A full results framework, including outcome indicators, will be designed in preparation.

Major lessons and recommendations for the year ahead

A summary of the recommendations, detailed through the text, is below. Other major lessons from the COVID-19 response are detailed in the text but have included building contingencies into plans/activities to try and mitigate against unforeseen circumstances, shifting to remote activity, and being able to scale up/down alternative activities to utilise funding whilst continuing to meet project objectives.

Recommendation	Owner	Timeline
Strengthen existing monitoring, evaluation and learning (MEL) approach and processes through developing a Fleming Fund results framework, developing a portfolio wide adaptive management workplan and setting outcome indicators for Phase II	DHSC/Itad	End April 2022
Further country visits (or equivalent), to be planned	DHSC	Annual

Recommendation	Owner	Timeline
as part of the next Annual Review process including different Fleming Fund countries and ideally more than one		review 2022
Trial innovative communication methods during the launch of the Open University online modules	DHSC/Mott MacDonald	March 2021
Produce clear statement on equity, with specific objectives, and review VFM tools	DHSC	End of 2021
Review lessons learned and results from the Foundation for Innovative NewDiagnostics (FIND) grant closure and disseminate across the wider programme. Define an approach to supporting data on substandard and falsified medicines in a Phase II.	DHSC	Summer 2021
Review measures to ensure quality is monitored in the Fellowships scheme	DHSC/Mott MacDonald	Summer 2021
Establish the Fleming Fund's approach to Political Economy Analysis, review current good practice, and set out plan for implementation for Phase II	DHSC/Mott MacDonald	Winter 2021
Review mitigation measures to improve Mott Macdonald forecasting and financial performance.	DHSC + Mott MacDonald	Winter 2021

Theory of change and progress toward outcomes

Summary of the Programme's Theory of Change

The Fleming Fund's ToC approach sets out that by improving laboratory capacity for diagnosis of infections as well as surveillance of AMR at a country level we will support LMICs to generate, use and share AMR data so they can optimise the use of antibiotics and reduce drug resistance. This remains valid and clear. Following implementation experience, it is recognised that the timeline of 2022 for achieving intermediate outcomes is not realistic. More time is needed to build the country-enabling environment and achieve outputs before intermediate outcomes can be fully realised and some work is needed to ensure the ToC reflects the right sequencing of activities for change to take place. In 2020 the Fleming Fund developed a ToC narrative that sits under the ToC and encompasses the whole Fleming Fund portfolio.

Underpinning the ToC are the [Fleming Fund's core principles](#), one of which is One Health. There has been some progress this year, with the piloting of the Extended Spectrum Beta-Lactamase (ESBL) Tricycle Protocol in six countries, which sets out a One Health approach to surveillance of E-Coli.

Combination of outputs contributing to the delivery of outcomes: Using AMR data

AMR data was used to avert outbreak of hospital acquired infection in Timor Leste. Nevio Sarmiento, who has worked as a scientist in the Timorese health system for 10 years and now works on the Timor Leste Fleming Fund country grantee team, says “better communication has also had a tangible impact on patient health. For example, in one case, test results from an intensive care patient showed the presence of a multi-resistant pathogen. New equipment from the Fleming Fund helped ensure testing accuracy and confirmed the pathogen’s antibiotic resistance pattern. As a result, the hospital closed the intensive care ward to completely disinfect the environment, avoiding further infection transmission.”

(Source: Mott MacDonald reporting)

Planned action for the year ahead

The Fleming Fund is still in early stages of implementation, following a longer than anticipated inception phase. Despite the relatively short period of activity, the programme is on track to contribute to expected outcomes and impact from 2022 and beyond.

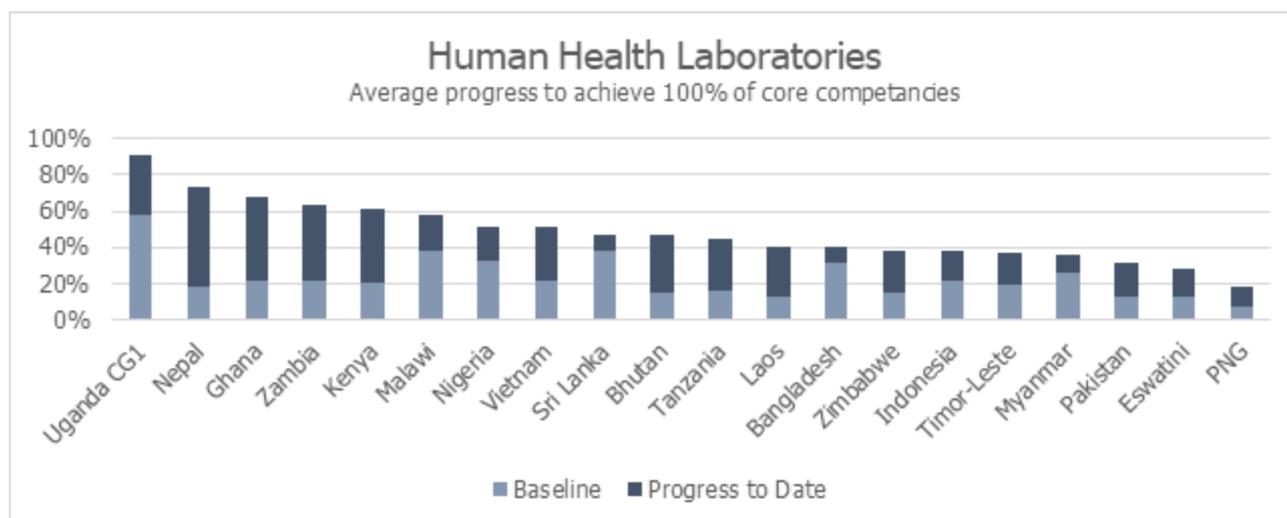
Following recommendations from the independent evaluators in January 2020, Mott MacDonald conducted a review to assess the programme's approach to achieving its outcomes. It found that activities are leading to Fleming Fund outputs and country outputs which is a good early indicator of progress toward outcomes.

The programme has adapted this year to focus more on clinician engagement, critical to ensure that 'quality data is shared' and used. It has also adapted to focus on system costing, such as costing of AMR NAPs through the funding provided to the Tripartite. The identification and subsequent action to unlock these bottlenecks has progressed the programme towards its intermediate outcomes, and outcomes in the longer term.

There is some further evidence of progress towards the intermediate outcomes. Data is being produced and shared at the international level, but there is less clarity on the extent to which this is happening at a country level. There are some instances of fellows supporting the use and sharing of data through formal systems in Fleming Fund countries.

As part of the Annual Review, the reviewer spoke to various stakeholders as part of a case study on Pakistan. The benefits of the model, including capacity-building through both the Fellowships and the Country Grant and the grantee having the right technical expertise and the focus on the One Health approach, were highlighted as strengths and this has led to the Government of Pakistan contributing additional, complementary funding towards tackling AMR in human health.

The investment is yielding substantial increases in core capabilities (as defined by the London School of Hygiene and Tropical Medicine ([LSHTM roadmap](#))) in over 140 laboratories due to the country partnerships in place and strong project momentum. By the end of March 2023 we would expect the majority of sites to be at core as a minimum, with 1 to 2 sites per country achieving advanced and / or extended functions. This demonstrates strong prospects for delivering longer term project outcomes.



An historical focus on activity completion as a key measure of grant performance rather than outputs, has made it difficult to monitor whether the programme was on track to achieve against outcomes set out in the ToC. 2020 has seen some progress with Mott MacDonald developing new indicators to report against in 2021, which are more at an output level. In 2021, there are further plans to develop a results framework which includes impact, outcome and output indicators. Itad have been commissioned to assess how far the Fleming Fund outputs will plausibly contribute to the Fleming Fund outcomes and will submit a report in December 2022.

Subject to the necessary approvals, the team intend to shift focus to design of a Phase II of the Fleming Fund over the next year, which would adapt to promoting use of AMR surveillance data as a primary objective and thus concentrate on activities which take the programme further towards its ultimate objectives. Suggestions from Itad’s third formative deliverable are under review with Mott McDonald but could include a refreshed approach to NAPs, increased use of Political Economy Analysis, and a review of stakeholder engagement.

Recommendations:

Agree stretching year 4 milestones for the monitoring matrix by end May 2021

Develop an overarching Fleming Fund results framework that can track progress on outputs and outcomes

Review ToC and finalise ToC narrative

2020 Monitoring Matrix

Out of the 33 output indicators from the 2019 monitoring matrix, 13 were replaced with new stretching indicators in 2020. Some of these changes were made to reflect progress into the implementation stage of the programme. Updated/new indicators are indicated in the output scoring section.

Given that a large proportion of the 2020 output indicators and their milestones were set to be more stretching, they cannot be compared like to like with the 2019 output indicator scores.

Detailed output scoring

Output title: Overall Fleming Fund Programme

5-point score 2020: A		5-point score 2019: A		Impact weighting: 15%	
Output Indicator	Indicator	Milestone 2020	Progress	Status at Year 2 – 2020	Impact weighting
1.1	Number of country grant request for proposals (RFP) published cumulatively (Mott MacDonald)	32	Surpassed (34)	22	15%
1.2	Number of countries with active country grants (Mott MacDonald)	22	Achieved (22)	12	15%
1.3	Fleming Fund projects achieving green or amber green rag rating for quality, timeliness and finance on average across the year (All)	70%	Not achieved (56%)	56%	15%
1.4	Percentage of Fleming Fund supported Human Health surveillance sites showing	65% of surveillance sites	Surpassed (66% of surveillance)	70% (23/33)	20%

	progress through the LSHTM roadmap functions and stages (Mott MacDonald)	showing progress (81/124)	sites showing progress (93/140)		
1.5	Number of regional grant workshops undertaken (Mott MacDonald)	27	Surpassed (39)	9	15%
1.6	Percentage of Fleming Fund supported Animal Health surveillance sites showing progress (Mott MacDonald)	60% of surveillance sites showing progress (37/61)	Surpassed (76% of surveillance sites showing progress (47/62))	N/A – Introduced in 2020	20%

The statements below provide further information on the indicators outlined above.

1.3. The quality of Fleming Fund projects has remained high with 87% of projects achieving green or amber green rag rating across the year. However, COVID-19 has impacted programme delivery and ability to spend with 53% and 54% green/amber green rag rating for finance and timeliness respectively.

1.5. The increase in the number of regional grant workshops undertaken can be attributed to the training grant, which instead of holding regional workshops (3), switched to country workshops (11).

Output title: Standardisation of data/quality of surveillance/quality improvement

The primary output of the Fleming Fund is the building and improvement of One Health AMR laboratory capacity and surveillance systems. This includes establishing a National AMR reference centre and developing protocols for sharing and disseminating AMR data across a nationwide network and then ensuring that these protocols are used to improve the quality of the surveillance data generated.

5-point score 2020: A+ 5-point score 2019: A Impact weighting: 5%

Output Indicator	Indicator	Milestone 2020	Progress	Status at Year 2 – 2020 Annual review	Weighting
2.1	Number of Fleming Fund supported protocols and guidance implemented in countries (All)	7 (cumulative)	Surpassed 9	5	35%

2.2	Number of new or revised documents related to AMS and antibiotic prescribing developed (Commonwealth Partnerships for Antimicrobial Stewardship (CwPAMS))	18	Achieved (18)	N/A – Introduced in 2020	25%
2.3	Number of countries implementing Tricycle using Fleming Fund funding (WHO)	6	Achieved (6)	5	40%

2.1. These protocols include: LSHTM Roadmap; Tricycle; OIE questionnaire-based protocol for collection of national animal health AMU data; WHO protocol for collection of national human health AMU data; WHO point prevalence protocol for collection of data on antimicrobial consumption in hospitals; A Protocol for Active AMR Surveillance in Poultry; GLASS guide for national surveillance systems for monitoring antimicrobial consumption in hospitals; GLASS manual on the management of antimicrobial consumption data and GLASS methodology for surveillance of national antimicrobial consumption.

2.2. CwPAMS was evaluated by an independent evaluator Ingentium. They found that the development of context-specific AMS strategies, tools, processes and guidelines in LMIC hospitals appears key to ensuring that AMS and AMR are prioritised and sustained during and after the completion of projects. The usefulness of the guidelines, tools and strategies was demonstrated during the COVID-19 pandemic when six out of the 12 health partnerships, working in collaboration with key hospitals/local health officials, were able to scale-up interventions on the production of alcohol-based handwash formula and associated infection prevention control awareness in LMIC hospitals and communities. This was a key unintended high-level effect and outcome which demonstrated the overall positive significance of CwPAMS and the various resources and tools it helped establish within each Project.

2.3. The impact of COVID-19 has meant that planned regional training to support the implementation of Tricycle was postponed and implementation has been interrupted. In addition, governmental approval to support implementation in Zimbabwe and Zambia was delayed and only obtained last quarter of 2020. In spite of these challenges, in 2020, Indonesia, India, Ghana, Pakistan, Jordan and Nepal were supported by Fleming Fund funding to roll out ESBL Tricycle surveillance.

Output title: Strengthening capacity and workforce on AMR

Alongside the development of laboratories, the Fleming Fund considers the professional development of in-country staff a key requirement in achieving intended outcomes. Technical capacity comes in many forms including; microbiologists, veterinarians, pharmacists, clinicians, nurses and health economists. By upskilling in-country staff and

providing them with the right training, equipment and systems, countries will be able to gather, analyse and share AMR data.

5-point score 2020: B 5-point score 2019: B Impact weighting:10%

Output Indicator	Indicator	Milestone 2020	Progress	Status at Year 2 – 2020 Annual review	Weighting
3.1	Number of Overseas Development Institute (ODI) Fellows placed (ODI)	10 (cumulative)	Not achieved (3)	3	10%
3.2	Number of Professional and Policy Fellows selected cumulatively (Mott MacDonald)	162	Not achieved (131)	80	25%
3.3	Number of countries with active Professional Fellows in place (Mott MacDonald)	19	Achieved (19)	4	30%
3.4	Number of online Open University Course Pathways available (Mott MacDonald)	3	Not achieved (0)	N/A introduced in Mar 2020	15%
3.5	Number of LMIC healthcare staff trained and tested demonstrating improved knowledge after training (CwPAMS)	943	Surpassed (1024)	N/A introduced in Mar 2020	10%
3.6	Total number of volunteering days contributed by NHS staff to strengthen AMS in LMIC healthcare institutions (CwPAMS)	809	Surpassed (1048)	N/A introduced in March 2020	10%

3.1. Since April 2020, COVID-19 has had a significant impact on the ODI Fellowships pilot which has hindered delivery towards indicator. ODI ran a successful recruitment campaign and 11 excellent candidates were identified, however since July, it was necessary to postpone deployments to 2021 due to COVID-19 restrictions

3.2. COVID-19 distractions have also delayed progress against this indicator. In January, another 24 Fellowship proposals were processed, so this would take the cumulative total to 155 – just shy of the 162 target. Fellows are starting to be seen as reference points for AMR within their organisations. For example, in some countries, fellows are responsible for drafting NAPs or are producing relevant data. Whilst progress did not meet

expectations, the increase from 80 fellows in 2019 to 162 has been considerable, especially given the impact of COVID-19.

3.4. The milestone for the number of Open University course pathways was not met because of changes to the module content development process which extended delivery time. Despite these initial delays, three modules of the Fleming Fund Online AMR Course were published online in Jan 2021, and a further 7 are due to be rolled out in February.

3.5. CwPAMS' independent evaluation found that all health partnerships generated significant positive impact on the LMIC workforce and associated decision-makers. Health partnerships successfully trained 1500 LMIC healthcare workers, 253 of which were pharmacists, in AMS. Good progress has been made in data collection. Prior to the CwPAMS programme, only one hospital out of all the countries had conducted data collection to the scale of the Global Point Prevalence survey (GPPS). This has since increased to 12 hospitals. NHS volunteers have also gained increased competency around AMR and improved interpersonal, management and training skills which will ultimately benefit their NHS institutions.

Output title: Lab equipment and assessment

The primary output of the Fleming Fund is the building and development of One Health AMR laboratory capacity and surveillance systems. This requires appropriate laboratory equipment to be in place and for labs to be assessed and supported, alongside strengthening of the AMR workforce. The Fleming Fund is supporting countries to establish and strengthen National AMR reference centres and the surveillance sites that report data into these centres.

5-point score 2020: A+

5-point score 2019: B

Impact weighting:15%

Output Indicator	Indicator	Milestone 2020	Progress	Status at Year 2- 2020 Annual review	Weighting
4.1	Number of labs supported cumulatively (Mott MacDonald)	176 (cumulative)	Surpassed (240 – 160human health and 80 animal health)	132	35%
4.2	Number of labs assessed cumulatively (Mott MacDonald)	282 (cumulative)	Not achieved (255 – 174 human health; 84	250	35%

			animal health)		
4.3	Number of countries where follow-up FAO Assessment Tool for Laboratories and AMR Surveillance Systems (ATLASS) assessments have been undertaken (FAO)	10	Not achieved (5)	N/A – Introduced in 2020	30%

4.1 Last year’s target was well-surpassed. The target was based on progress from years 2 and 3 which assumed that countries would have 2 reference laboratories (one human health and one animal health), and 5 to 8 sentinel sites. In reality, many larger countries have been able to support a larger number of sentinel sites.

4.2. Good progress was made this year in the number of labs assessed. An ambitious target (282) was set which was informed by the 2019 report which stated that 250 labs were assessed. That 250 was calculated using the list of sites included in each country's RFPs but proved to be an overestimate of actual assessments conducted. A more sensitive monitoring system is now in place which calculated that, by the end of 2019/beginning of 2020 there were 184 on-site laboratory assessments completed. As of 2021, 255 sites will have at least one completed needs assessment. This reflects reduction in scope for some country grants (e.g. Sierra Leone), and non-progress with regards to some other country grants (e.g. India, Burkina Faso).

4.3. ATLASS follow-up assessments were conducted in 5 countries planned at the end of 2019 and implemented in-part during first quarter of 2020. The major challenge to meeting this target has been restrictions on travel (regionally, and in-country) to conduct field activities. As the ability to conduct these assessments virtually is becoming more likely, virtual refresher training for ATLASS assessors are being considered, and an initial training has been conducted in Cambodia (involving staff from 3 public laboratories). The virtual training will soon be implemented in other countries in Asia and Africa.

Whilst output indicators 4.2 and 4.3 did not meet the milestones set, the success with output indicator 4.1 and comparison against actuals in 2019 for indicator 4.2 demonstrate that greater progress has actually been made.

Output title: Governance

The development and sustainability of AMR surveillance networks in-country is dependent on strong AMR governance and leadership. In most instances, this takes the form of an AMR Coordinating Committee (AMRCC) which is chaired by a senior leader in the Ministry of Health with representatives across all AMR relevant sectors. AMRCCs often also have

technical working groups leading on specific objectives within the Global Action Plan on AMR. The Fleming Fund aims to engage both the AMRCC and the surveillance technical working group in-country to ensure country ownership and sustainability of Fleming funded activity. In establishing these governance and leadership mechanisms, countries are demonstrating their commitment to tackling AMR.

5-point score 2020: C

5-point score 2019: B

Impact weighting: 5%

Output Indicator	Indicator	Milestone 2020	Progress	Status at Year 2 - 2020 Annual review	Weighting
5.1	Number of countries with functioning surveillance technical working groups meeting at least once over the 2020 calendar year (Mott MacDonald)	20	Not achieved (15)	7	40%
5.2	(i) Number of countries where the national body in charge of the country AMR strategy receives AMR data report(s) generated by surveillance sites at least once a year (Mott MacDonald)	11	Not achieved (8)	N/A – Introduced in 2020	40%
	(ii) Number of countries where the national body in charge of country AMR strategies discusses implications for national strategy at least once a year (i.e. informed by AMR data generated and received) (Mott MacDonald)	11	Achieved (11)		
5.3	Number of countries where legal reform processes linked to addressing AMR have been initiated following the assessment of regulatory frameworks (FAO)	8	Achieved (8)	N/A – Introduced in 2020	20%

5.1. There was some impact of COVID-19 on Technical Working Group meetings, including governments whose resources were reprioritised onto pandemic response. No Technical Working Group meetings have been held in Sri Lanka, as a Memorandum of Understanding is yet to be signed, or in Indonesia as the grant is still in its early stages.

5.2. Grants need to be producing data to meet this indicator which is contingent upon procurement, renovations, equipment installation, training and functioning Technical Working Groups/AMRCCs (national bodies) all being in place. COVID-19 has had an

impact on all of these elements to varying degrees. This is evidenced in delayed activity completion rates for country grants and slower procurement/installations than planned in 2020. In addition, the figures are limited to the evidence that could be collected in interviews with National Focal Points which COVID-19 priorities would have made more difficult.

5.3. Following completion of legal assessments of regulatory frameworks in all 12 focal countries, some legal reform process has been initiated in 8 countries (Cambodia, Ethiopia, Ghana, Kenya, Philippines, Sudan, Zambia, and Zimbabwe).

Output title: Antimicrobial Consumption (AMC) Data

The Fleming Fund's main aim is to support the generation of high-quality data across human health and animal health sectors, including AMU and AMC data. The generation of AMU and AMC data refers to the monitoring and recording of drug production, import and prescription, and consumption patterns. The Fleming Fund aims to support countries in collecting this data through surveillance networks across both human and animal health sectors. Standardised protocols such as Point Prevalence Survey and the OIE database on antimicrobial agents intended for use in animals will be used to collect this data.

5-point score 2020: A

5-point score 2019: A

Impact weighting:15%

Output Indicator	Indicator	Milestone 2020	Progress	Status at Year 2 – 2020 Annual review	Weighting
6.1	Number of countries contributing to OIE database (OIE)	160	Achieved (160)	153	30%
6.2	Number of countries reporting quantitative data to OIE database (OIE)	125	Surpassed (133)	118	30%
6.3	Number of countries in Fleming Fund regions enrolled in the GLASS-AMC module and submitting consumption data (WHO)	10	Not achieved (10 enrolled but not submitting data)	N/A – Introduced in 2020	40%

6.1 and 6.2. There has been good participation from the countries compared to all previous rounds of the OIE AMU Data Collection. During the 5th round, the OIE prepared dedicated AMU workshops and webinars for Africa, the Americas and Asia, Far East and Oceania. During these activities, the OIE introduced an OIE Calculation Tool to assist with the calculations presented the animal biomass and discussed the future AMU IT System to

understand the needs of the countries. The fifth round covered more countries reporting quantitative data (133 countries), an increase of nearly 50% of countries when compared to the first round (launched in 2015). The fifth report will be published in the first quarter of 2021.

6.2 Fleming Fund funds the OIE's AMU database so these results are directly related to the programme but, as we do not fund the work of the country focal points, it is not 100% attributed to the Fleming Fund.

6.3. Currently 18 countries have enrolled in the GLASS AMC module, including: Côte d'Ivoire, Mali, Bénin, Burkina Faso, Lesotho, Peru, Iraq, South Sudan, Jordan, Tunisia, Iran, Kuwait, Belgium, Timor Leste, Maldives, Nepal, Indonesia and Bhutan. Of those enrolled in the GLASS AMC module, 4 are Fleming Fund countries (Nepal, Indonesia, Timor Leste and Bhutan) and 10 are in Fleming Fund regions. However, while these 10 enrolled in the GLASS-AMC module, they were not able to submit consumption data. Due to COVID-19, WHO were not able to finalize and publish the revised protocol until October which gave a short window for data submission. Countries were also still prioritising COVID-19 response at this time.

Output title: Substandard and Falsified Medicines (SF) data

A very direct relationship exists between AMR surveillance and data on quality of medicines. With improved treatment outcomes, a treatment failure should be a signal for investigation both for resistance, and for substandard or falsified medicines. Data on SF medicines will enable countries to better understand the quality of medicines in their markets and will inform an improved understanding of the prevalence of AMR and how it can best be tackled including prevention, detection and response to SF medical products.

5-point score 2020: B 5-point score 2019: B Impact weighting: 5%

Output Indicator	Indicator	Milestone 2020	Progress	Status at Year 2 – 2020 Annual review	Weighting
7.1	Number of countries undertaking quality surveys for SF medicines supported by Fleming Fund cumulatively (WHO Substandard and Falsified)	8 (cumulative)	Not achieved (4)	4	50%
7.2	Evaluation report of field screening technologies completed (FIND)	Evaluation report of field screening	Achieved	N/A introduced in 2020	50%

		technologies completed			
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7.1 Due to COVID-19, quality surveys for SF medicines could not take place as WHO staff were unable to travel to countries to support with the data collection. This approach to market surveys is being altered for 2021, placing more focus on developing the market survey application pilot in Tanzania so countries are able to automate the conduct of quality surveys and enhance the quantity and quality of data captured to inform risk-based post marketing surveillance programmes.

7.2 As the FIND grant has come to an end in 2020, the year ahead provides a good opportunity to review how the results and findings from SF medicine grants can be disseminated and used across the wider Fleming Fund portfolio. For example, the use of SF medicines can enable bacteria to become resistant to antibiotics, so the results of the quality medicine surveys or the handheld devices included in FIND's research could be provided to country grantees to raise awareness of SF medicines in local contexts as part of a holistic approach to tackling AMR.

Output title: AMR data

The Fleming Fund's main aim is to support the generation of high-quality data across human health and animal health sectors, this includes AMR data. The generation of AMR data refers to the testing and recording of samples using standardised protocols for sample collection and using best practise testing processes.

5-point score 2020: A+ 5-point score 2019: A+ Impact weighting:15%

Output Indicator	Indicator	Milestone 2020	Progress	Status at Year 2 - 2020 Annual review	Weighting
8.1	Number of Fleming Fund countries submitting data into GLASS (Mott MacDonald/WHO)	10	Surpassed (13)	7	30%
8.2	Percentage of Fleming Fund supported countries producing improved data into GLASS (WHO).	60% of countries producing improved data with a minimum of 7 countries meeting this KPI	Achieved (60% of countries producing improved data (14 / 19 countries).	80% (4 out of 5: Bhutan, Nepal, Ghana, Tanzania.)	70%

8.1. WHO have reported that 18 out of 23 Fleming Fund countries are enrolled in GLASS, 15 countries submitted data on the status of national AMR surveillance in 2020 and 13 countries submitted AMR data in 2020

8.2. The number of Fleming Fund supported countries producing improved data into GLASS increased by 14 this year (from 5 in 2019 to 19 in 2020). This increase in overall countries is far more than expected therefore the percentage achieved is a bigger achievement than it seems. To account for this progress, this output has been scored A+.

Output title: AMR Burden Data

AMR burden data is vital to understanding the human cost and economic impact of AMR. This is particularly important when trying to develop the case for investment in AMR. The quantity and quality of AMR burden data is currently inadequate, as are the analytical frameworks available to analyse the burden of AMR.

5-point score 2020: A

5-point score 2019: A

Impact weighting: 10%

Output Indicator	Indicator	Milestone 2020	Progress	Status at Year 2 – 2020 Annual review	Weighting
9.1	Number of articles on historical AMR burden (including incidence) submitted to a peer review journal cumulatively (Global Research on Antimicrobial Resistance (GRAM))	8 (cumulative)	Achieved (8)	4	100%

Over 2020, 4 articles were submitted to peer reviewed journals including a significant output on trends in global AMC. The GRAM papers are as below:

- [The challenges of estimating the human global burden of disease of antimicrobial resistant bacteria – Current Opinion in Microbiology](#)
- [Global, regional, and national sepsis incidence and mortality, 1990–2017: analysis for the Global Burden of Disease Study](#)
- [Drug-resistant enteric fever worldwide, 1990 to 2018: a systematic review and meta-analysis](#)
- [Surveillance and monitoring of antimicrobial resistance: limitations and lessons from the GRAM project](#)
- [Improving the estimation of the global burden of antimicrobial resistant infections](#)
- [Changes in antibiotic resistance in animals](#)
- [Microbiology Investigation Criteria for Reporting Objectively \(MICRO\): A Framework for the Reporting and Interpretation of Clinical Microbiology Data](#)

Output title: Awareness and Advocacy

Given the complexity of AMR, with a number of sectors and factors contributing to the threat and to the solution, there is still a lot of uncertainty around the nature of the problem, its severity, and the most appropriate interventions to reduce the acceleration of resistance. The Fleming Fund recognises that improving awareness and understanding of the threat among key surveillance stakeholders (laboratory staff, health care workers including clinicians and nurses, veterinarians, farmers, other antibiotic prescribers, and relevant national government ministries) is crucial to ensure countries are convinced of the need for action on the basis of robust evidence. We expect this to take place on the condition that the data produced is of suitable quality and is shared with key stakeholders locally, nationally, regionally and globally.

5-point score 2020: A

5-point score 2019: A+

Impact weighting:5%

Output Indicator	Indicator	Milestone 2020	Progress	Status at Year 2 Annual review	Weighting
10.1	Average number of new visitors to the website per month throughout 2020.	100	Surpassed (1596)	N/A – Introduced in 2020	30%
10.2	Average number of page views per news article per month uploaded to the Fleming Fund website in 2020	50	Surpassed (82)	N/A – Introduced in 2020	30%
10.3	Number of articles published through the South Centre	12	Achieved (12)	8	20%
10.4	Percentage of South Centre stakeholders who have participated in South Centre activities and have subsequently incorporated suggestions and/or best practice in their own work	40%	Achieved (40%)	N/A – Introduced in 2020	20%

10.1 and 10.2. Throughout 2020, all content published on the Fleming Fund website has been monitored using Google Analytics. The most successful articles received 201 and 187 page views in 30 days following their publication, and so further analysis will be conducted to establish why they were so successful, and to replicate this approach. The number of new visitors to the website remained largely consistent throughout the year, with the content published and changes to the website structure having little effect. In 2021, different approaches to online and offline communications will be trialled to better target audiences outside of existing Fleming Fund networks. This will include producing

content for Twitter that does not rely on click-throughs to the website and piloting innovative communication methods such as WhatsApp and text message campaigns.

10.3 and 10.4. South Centre's communications work has ensured LMIC views have contributed to the development of AMR work streams at the global level, particularly in relation to COVID-19.

Project performance not captured by outputs

Given the nature of the programme, there is a range of work which is not captured by the outputs. This is broadly in three areas: COVID-19 flex, country-level achievements, and our work with the WHO on substandard and falsified medicines.

During the COVID-19 pandemic the programme pivoted quickly to support the response. Examples of how the Fleming Fund is not only working to tackle AMR but other global health security threats as well are provided elsewhere in our review, and an initial article has been produced which sets out the benefits of the flex to COVID-19 WGS in Africa: "[To understand why bacteria behaves in a particular way, you need genomics...](#)".

There are also a number of country-specific achievements which are not captured in the outputs. For example, significant progress has been made in Timor-Leste where blood culture service is now available 24 hours a day 7 days a week at the Guido Valadares National Hospital in Dili and there is ongoing work to comprehensively quantify the use of antimicrobials. All laboratories supported by the Fleming Fund in Timor-Leste have reported improved capacity in terms of core AMR surveillance functions, as set out in the LSHTM roadmap. The Veterinary Diagnostic Laboratory (VDL) can conduct reliable bacterial identification and agreements have been signed between the VDL and National Health Laboratory (NHL) so that bacterial isolates can be sent to NHL for diagnostics and storage in a context where no evidence of AMR in the animal health sector was previously collected.

In addition, we have seen important achievements in Uganda, including that all seven human health laboratories supported by the Fund can now collect all four main sample types, culture and identify all eight priority pathogens and are participating in an External Quality Assurance Scheme (EQA). All three animal health laboratories supported by the Fleming Fund can now capture demographic /epidemiological data with new samples, culture and identify all four key pathogens, and participate in an EQA Scheme.

The WHO SF Medicines grant had some achievements not captured by the monitoring matrix. For example, the response to the Smartphone Reporting Application Pilot has been positive with many countries requesting use of the application. WHO have partnered with Durham University to draft peer-reviewed papers showcasing their findings. Finally, although the launch of the upgraded Global Surveillance and Monitoring System has been

delayed, greater security measures have been incorporated, increasing the resilience of the system.

Risk

Overview of programme risk

The Fleming Fund risk register is monitored regularly and reviewed quarterly by the Fleming Fund Project Board. The Fleming Fund also has a joint Risk Register with Mott MacDonald and a country risk register which is also shared with the Fleming Fund Project Board. The risks that have featured as the highest rated risks the most often in the Fleming Fund risk register in 2020, are listed below:

1. COVID-19 spreads to/impacts Fleming Fund countries
2. Underspend on project forecasts for Her Majesty's Treasury profile in 2020/21
3. Roll out of Mott MacDonald grants are delayed beyond sequence outlined in the workplan, compromising achievement of results set out in implementation plan.

Mitigation strategies have been developed for all risks and monitored on a quarterly basis. Escalated risks are taken to governance boards as appropriate.

Programme management: delivery and commercial considerations

Programme management of the Fleming Fund programme has adapted over the year in response to various internal and external changes and challenges to programme objectives. Monthly light touch project information dashboards showcasing progress of key Fleming Fund programme activities and deliverables were also initiated and later circulated on a quarterly basis to match quarterly project board meeting. These changes ensured that information obtained from quarterly review meetings with Mott MacDonald were promptly reflected in the dashboard updates. This has improved the Fleming Fund's ability to effectively track project progress, ensured the governing board is aware of any areas of concern and can advise on relevant mitigating actions to be taken.

The Fleming Fund ToC narrative is under review with the aim of improving overall understanding of Fleming Fund long-term outcomes and impact on tackling global AMR.

Delivery against planned timeframe

The COVID-19 pandemic adversely affected delivery in all Fleming Fund countries as detailed throughout this review. At the start of the year, progress against the project work plan was largely on track. Both Mott MacDonald teams and grantees initiated various alternative processes such as remote working. In addition, signature delays to Memoranda of Understanding, largely due to bandwidth in country, with 5 countries in South and South East Asia prevented progress.

In the latter part of the year, progress was made with 6 new first country grants agreements signed. Professional Fellowships were rolled out in 19 countries out of a target of 20 and 3 second country grants agreements were signed out of the 12 planned for the year.

As the Fellowships have been the most affected by COVID-19, further discussions are ongoing between DHSC and Mott MacDonald to establish what changes can be made to minimise the impact of the pandemic on Fellows in 2021 and to measure the quality of the alternative approach to activities.

Performance of partnerships

The Fleming Fund has a wide range of delivery partners including the multilaterals, NGOs, university institutions and private sector companies.

Relationships with key partners have been strengthened during the year and have played a key role in driving delivery of activities across the Fleming Fund programme. Mitigating action agreed and taken by Mott MacDonald and the Fleming Fund team to manage the impact of the COVID-19 pandemic largely ensured that progress was made. Partners worked quickly to capitalise on synergies between the infection prevention activities related to COVID-19 and AMR, which represent an opportunity in the long run for AMR work.

Where necessary, the Fleming Fund team and Mott MacDonald have revised the scope of the programme's activity in-country to cater to the technical ability available to improve local skills. In Senegal and Sierra Leone, where grant placement proved difficult, separate grants were placed for human health and animal health. In both cases, the scope of in-country project activity was adapted with both UK government and national government partners, to ensure that suitable grantees could be found.

The Fleming Fund is learning and applying lessons from partners' experience. Partners report on challenges and lessons learnt as part of quarterly or biannual reporting mechanisms. Mott MacDonald also holds a Programme Learning Log to capture lessons learnt in different countries, which are then shared across the to contribute to learning in

other countries. The 2020 Delivery Partners Event, brought together all Fleming Fund partners to coordinate and discuss key issues and lessons learnt with a more diverse range of partners. Examples of lessons learnt and applied in 2020 include the introduction of the West African approach to grant making detailed above. Country Co-ordination meetings are now taking place across all Fleming Fund countries following the recognition that alignment of grant streams (and projects needed improvement. DAI Global, the Fleming Fund country grantee for Pakistan, Indonesia, Bangladesh and Nigeria, are an example of strong coordination as linkages and communication have been established between these countries.

WHO have continued to work to a high standard in 2020. As part of the SF Medicines grant, WHO have consistently monitored and adapted activities to mitigate against disruption. The approach to the Smartphone Application workstream has also changed to ensure greater country ownership of data and the platform.

FIND also experienced disruption due to travel restrictions which prevented key staff from conducting laboratory work and prevented samples from being transported across borders. The approach was adapted to share analysis between laboratories in Oxford, UK and Bangkok, Thailand with samples analysed in the UK to mitigate against further delays and uncertainty.

Asset monitoring and control

During 2020, the Fleming Fund refined its asset management and control policy. This proved quite timely as it came into effect with several country grants coming to conclusion e.g. Ghana Country Grant 1. The primary change was instituting processes for tracking assets handed over to country governments. The policy includes mandatory tagging of assets prior to handover so that they can be tracked and identified to have come from the Fleming Fund project. Residual value of assets was highlighted in the policy to ensure that grantees take into consideration depreciation value of assets and disposal where they fall below allotted value and type of asset prior to disposal. In the case of capital assets such as valuable lab equipment transferred to the national governments, confirmation that the equipment will be installed and used for the right purposes (AMR surveillance work) was included within the policy. This confirmation forms part of the handover document letter that national governments will be required to provide to the Fleming Fund via Mott MacDonald who holds the asset register. By reinforcing its asset management policy, the Fleming Fund has contributed to effective monitoring of project assets during the year as various country grants come to an end.

Financial performance

Value for money (VFM) assessment

The Fleming Fund continues to maintain strong cost controls in place at all levels of delivery (DHSC, Mott MacDonald and at grantee level) supporting VFM (See [2019 Annual Report](#)).

For Mott MacDonald this is carried out principally through three instruments: (1) country grantees' returns in quarterly reporting; (2) grant reviews; and (3) three Deep Dive studies on selected VFM topics of interest. These are:

1. Managing for Effectiveness
2. Foundations for Costing and Benefit Identification of National AMR Surveillance
3. TBC: Procurement of equipment and consumables

Together, and in combination with Itad's analysis, these are helping guide programme decision-making (e.g. approach with Country Grant 2 design) as well as informing the Business Case for the second phase of the Fleming Fund.

Economy

The 2019 Annual review demonstrated strong cost control measure across the programme and these have continued. COVID-19 has seen a distinct shift toward "lower cost" online collaboration/workshops/events, which we expect to continue into 2021, through sharing of successful adaption measures across grantees. The fourth Delivery Partners' Event was held online costing significantly less than previous events. While grantees confirmed that remote activities were successful, this was not a long-term lower cost solution given practical limitations associated with remote monitoring (verification) and remote lab training activities and the challenges to building relationships/networking. There will be scope to consider a "hybrid model" which balances the potential for cost saving with quality considerations post COVID-19 restrictions.

Efficiency

Overall efficiency has been impacted in two main ways.

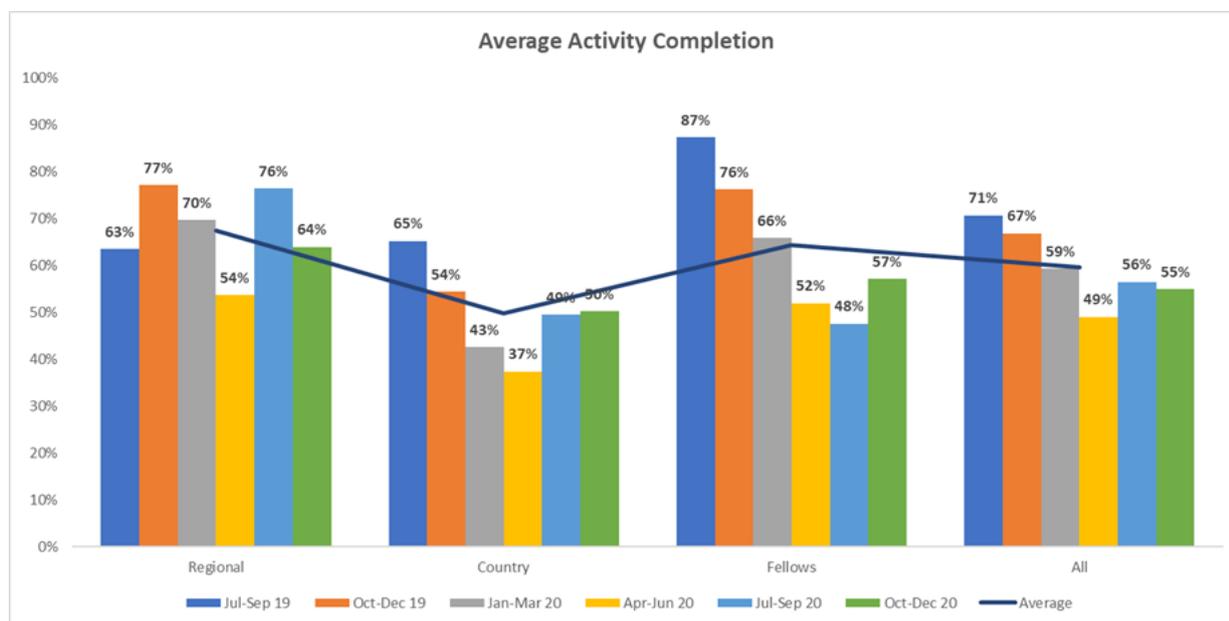
Firstly, with a larger number of mature grants in place the ratio of expenditure of programme activities to administrative costs was at its highest level to date.

Secondly, COVID-19 negatively impacted on this trend meaning that frontline activity was lower than forecast. Grantees swiftly adapted and this ratio improved over the course of the year. However, delays were inevitable and meant that delivery has been behind expected schedule. In 2020 the Fleming Fund extended its review of M&OH (Management and Overhead costs) to all Delivery Partners. This demonstrated that while significant variation was present (from 1% to 33% percent) this was only following a robust assessment of the overall offer from the supplier.

Itad's analysis suggests the system being rolled out will deliver implementation efficiency (activities), although there is not yet supporting evidence for technical efficiency (outputs). This is an area the programme team are continuing to work with Mott MacDonald on.

As the second round of country grants are in the most part continued with existing grantees there is limited scope for fully revisiting M&OH costs but there will be greater opportunity in the proposed second phase. For example, several grantees hold multiple grants. Where these grants are held in the same region, there is a case for ensuring economies of scale. This should be explored in grants for Phase II of the Fleming Fund.

The chart below evidences the impact of COVID-19 on implementation, with knock on effects for efficiency.



The Fleming Fund team has also reviewed certain grants to ensure they still represent VFM. As a result, two grants were stopped where they did not align with longer term ambition (FIND grant and Country Grant 1 in Ghana). Instead, Mott MacDonald is looking into working with FIND on the country grant programme, utilising FIND's technical expertise to support efficiency of, and coordination between, bacteriology laboratories. These proposed activities include rolling out the AMR Connectivity project, currently a pilot

funded by Global AMR Innovation Fund , which would maximise the impact of wider DHSC investment.

In response to the recommendation on efficiency in the 2019 VFM report, the Fleming Fund Team developed a tool for collation and assessment of M&OH and Indirect Costs (IDC) costs of all Fleming Fund grants. The tool facilitates comparison and analysis of the cost and provide effective visualisation of cost differences and trends across grants, grantees and regions. It shows that there are currently wide variations on M&OH and IDC costs across grants, grantees and regions. This has been tested with Mott MacDonald has is attributed to regional differences (including security considerations), administrative structures and other challenges that impact on associated costs.

Recommendation: the Business Case for Phase II, drawing upon current analysis, should include key actions within the commercial case to help have a more consistent and evidence-based approach to approving proposed levels for management and overhead costs.

Effectiveness

A series of VFM products have been being produced by Mott MacDonald to help strengthen the programmes current and longer-term prospects for demonstrating effectiveness. These include:

- Committing to design a "**Foundations for Costing and Benefit Identification of National AMR Surveillance**" to help evaluate the costing and project expected benefits (quantitative and qualitative) of a national AMR surveillance system, including via a pilot.
- Produced a comprehensive "**Managing for Effectiveness Review**", which found:

"There are clear examples in three of the four case studies of progress through the Theory of Change (ToC), where Activities are leading to Fleming Fund Outputs and Country Outputs, a good early indicator of progress toward Effectiveness. The majority of examples are in areas of Laboratory Infrastructure Enhancement and Systems Development.

While these represent initial positive signs, we are at the very beginning of the process and continued support will be required to ensure gains that have been made are sustainable and that further progress can be made through the ToC pathways."

It is important to note here that whilst COVID-19 has led to significantly lower costs for the programme, the effectiveness of remote working is lower than in-country training. This is especially clear for the Fellowships scheme, where capacity-building initiatives have not been able to go ahead and fellows are reporting difficulties accessing the knowledge, hands-on training and mentoring which otherwise would be possible.

Recommendations:

Clinical engagement (including with animal health sector) should be considered within the design of Phase II, which the Fleming Fund's Technical Advisory Group (TAG) should be consulted on

DHSC and TAG should support Mott MacDonald in the development and implementation of the "Foundations for Costing and Benefit Identification of National AMR Surveillance" product being led by Mott MacDonald.

Equity

The programme aims to improve the collection of demographic data for samples submitted for routine testing, as part of good clinical and laboratory practice. Grantees have been asked to provide data on whether relevant demographic data, including gender information, is collected for routine clinical samples as part of grantee quarterly reporting for country grants. This will enable local and national analysis of resistance patterns by gender. This information will become available in Quarter 2 of 2021.

The programme is currently limited in terms of data collection. In human health, the programme supports passive surveillance for drug resistant infections in patients having samples taken as part of their routine care, with a particular focus on hospital inpatients (as these represent the most severe infections). Therefore, any social group unable to access this level of healthcare is not represented by the data produced, such as rural or low-income groups.

Currently, not all hospitals collect information on the gender of the patient from whom the sample is taken, so many countries cannot disaggregate their data on gender. A further consideration is that the programme has no influence over who attends hospital (and who would therefore be eligible to have a sample taken). There may be additional reasons for different gender proportions in those who present with fever, related to the type of disease, which the programme is not currently designed to capture. Gender analysis of surveillance data could make it possible to identify sex and gender-related patterns in prescription of antimicrobials and track the effectiveness of any policies addressing the AMR threat. This is something that should be considered as part of a Phase II. Tropical Health and

Education Trust and Commonwealth Pharmacists Association will also be conducting some gender and social inclusion training as part of the CwPAMS programme, and they have offered to share this with all grantees.

The programme currently reviews the gender breakdown of fellows, where half of Professional Fellows Cohort 1 are women. Data is not yet available for Cohort 2 or Policy Fellows but is being collected. The Fellowships Programme was also designed to be flexible to take into account childcare arrangements, and to encourage women to apply. The gender of grantee and MM staff who are funded by the programme is reviewed annually.

There is ongoing balancing of geographic equity in the regional and global grants. Itad has noted that Equity was included in VFM Reviews with a justification for regional site selection. There are also efforts made to ensure Asia and Africa representation at key for a including the Technical Advisory Group (TAG) and Delivery Partner's Event.

Recommendation:

As part of the design for Phase II, greater consideration should be given to how gender intersects with the programme both at a programme management and output level. This could be combined with considerations for other inequalities, such as disability and socioeconomics, in line with the programme's legal obligations.

Quality of financial management

Calendar year 2020 has been a challenging year for the Fleming Fund project, with COVID-19 affecting project progress and spending on a number of activity areas as discussed above. In conjunction, the UK Government's Official Development Assistance (ODA) budgets, which includes the Fleming Fund budget, were directly impacted by a drop in Gross National Income (GNI). HMT therefore undertook a savings exercise in June 2020, with the main objective being to either stop, slow down or reduce ODA spend during 2020 where possible.

Original forecasts were also amended down to reflect the impact of COVID-19 on activities. Some delivery partners continued to underspend against these revised budgets and so the programme has performed a robust re-forecasting for 2022.

Delivery partners

A short summary of financial management for each delivery partner is set out below:

Workstream 1 – Surveillance Protocol and Platform

- GRAM Grant – University of Oxford

Financial management continues to be disjointed for this project whereby forecasts and actuals vary by approximately 22%. This grant is one that was selected as part of an invoice spot check process in September. To date only some of this information has been received.

Workstream 2 – Multilateral funding

- WHO Grant – World Health Organization (WHO)

Ahead of the most recent disbursement in Q4 2020, WHO were able to demonstrate their spend-to-date and their commitments/potential to spend which enabled release to them of additional funding.

- WHO Grant on Substandard and Falsified Medicines – World Health Organization (WHO)

This grant is now in its third year of activity and is progressing well and spending in line with its objectives.

- OIE Grant – World Organisation for Animal Health (OIE)

No funding disbursements were made to OIE for the grant during 2020. This grant will be further extended and funded during 2021.

- FAO Grant – Food and Agriculture Organisation (FAO)

The FAO Grant has now been extended into its fifth year of funding. Ahead of the most recent disbursement in Q4 2020, FAO were able to demonstrate their spend-to-date and their commitments which enabled release of additional funding.

- Department of Environment, Food and Rural Affairs FAO International AMR Reference centre

The International AMR Reference Centre was delayed and not spending as anticipated in 2019. This did see the remaining payment for this activity slip into 2020, with the final disbursement being made in March 2020.

- South Centre Grant – The South Centre

The grant has been progressing well against objectives and a no cost extension, followed by costed extension, was approved as a result into 2020/21. The South Centre has now received all funding under its existing agreement and is on track to fully utilise this.

Workstream 3 and 4 – Portfolio of Country and Regional Grants and Fellowship Scheme Mott MacDonald – Mott MacDonald Limited

- Mott MacDonald Limited - Mott MacDonald

One of the key finance recommendations from the 2019 Annual Review was to agree a set of mitigation measures to improve Mott MacDonald forecasting and financial performance. In response to this, Mott MacDonald drew up mitigating actions which include monthly financial reports and meetings. Forecasted spend is RAG rated by Mott MacDonald against an agreed set of criteria to indicate confidence in both timing of payment and amount, and discounting of forecasts is also applied in some instances with a rationale.

Mott MacDonald took part in an invoice spot check process. We received a good response and no issues were identified.

Workstream 5 – Independent Evaluation

- Itad Evaluation of Mott MacDonald and GRAM Grant – Itad Ltd

Itad are paid based on their actuals, with a retention fee held back for delivery against Key Performance Indicators and objectives. Itad are fully transparent with their fees and expenses, and historically have provided all receipts available to support their invoice claims.

Workstream 6 – New Grants

- CwPAMS Grant – Commonwealth Partnership for Antimicrobial Stewardship

This grant has performed strongly to date and has consistently delivered on target and to budget. As such, a costed extension has just been approved for additional funding, to be delivered during the remainder of 2020/21 financial year.

- ODI/Health Economist Grant – Overseas Development Institute

This grant is spending on a much slower profile than anticipated in the original grant agreement, with the work largely being impacted by COVID-19. This creates uncertainty with forecasting, as it is contingent on countries to state if they wish to have an ODI Fleming Fellow in Country.

- FIND Grant – Foundation for Innovative New Diagnostics

This grant was funded using unutilised Fleming Fund budget.

- AMR Multi-Partner Trust Fund (MPTF) Contribution – AMR MPTF

A contribution to the AMR MPTF was disbursed using Fleming Fund underspends from 2019/20 budgets, in March 2020.

Monitoring evaluation and learning

Evaluation

The Fleming Fund Country, Regional and Fellowship Grants are independently evaluated by Itad. Due to COVID-19 travel restrictions and subsequent delays to overall programme delivery, there was a reconfiguration of evaluation activities, tools and resources to allow for remote data collection while maintaining quality. It was also decided to postpone the Summative Evaluation deliverable which was scheduled for this year until the programme is further ahead in its implementation. The 2020 evaluation focused on understanding the implementation and strengths and weaknesses of (1) Fleming Fellowship scheme and (2) Regional Grants and (3) the prospects for use of AMR surveillance data at country level, with the purpose of informing the design of a potential second phase of the Fleming Fund. Itad shared preliminary findings in October 2020 but the final report will be submitted in February 2021.

An overview of key findings suggests that the Fellowship Scheme and Regional Grants are well-conceived and expected to make important contributions to the Fund's overarching goals. At this stage, it has found that the Fleming Fund has focused on the generation of data and strengthening AMR surveillance systems, but it lacks an approach to identifying opportunities to make use of data at country-level. However, opportunities to influence AMR-relevant policy agendas do exist. The evaluation made several recommendations on lessons and implications for future action some of which are for a Phase II, others for more immediate consideration. These recommendations are under review by DHSC and Mott MacDonald.

Itad are also the independent evaluators of the GRAM project; In October 2020 they presented cross case analysis findings of the GRAM project to the delivery partners and funders. The evaluation of GRAM identified core strengths and challenges with the Global Burden of Disease's approach to sharing and communicating findings and provided a number of clear recommendations which will help strengthen utilisation of the GRAM outputs at regional and country level.

An interim evaluation of the CwPAMS grant was conducted over the summer of 2020 by independent evaluators Ingentium. CwPAMS was assessed against the Organisation for

Economic Cooperation and Development's Development Assistance Committee (OECD-DAC) evaluation criteria on relevance, effectiveness, impact, efficiency and sustainability and scored an overall 78% "Very Good". The evaluation found there had been evidence of improved practice relating to Antimicrobial Stewardships (AMS) and prescribing practice, with the health partnership approach being a key factor to success. Recommendations from the evaluation have been incorporated into the extension period such as gender equality and social inclusion training and will feed into plans for a second phase.

Recommendation: Review Itad third formative deliverable and agree recommendations to take forward.

Monitoring

Output indicator milestones in the monitoring matrix were updated in March 2020. Deliverables, service levels and key performance indicators (KPIs) for Mott MacDonald and Itad were updated in the first quarter of 2020. There are plans to develop the monitoring matrix into a portfolio-wide comprehensive results framework, to include outcome and impact indicators. This will be done in consultation with Itad and our delivery partners, with a skeleton by November 2021 in time for inclusion in the business case and finalised by April 2022.

Based on recommendations from both Itad's second formative evaluation and Mott MacDonald's review on managing for effectiveness, Mott MacDonald developed its monitoring mechanisms to better track progress at output level. 2020 has seen considerable progress in this area with the submission of quarterly detailed monitoring reporting. These reports provide data on KPIs, the monitoring matrix indicators, early results framework, and a summary of grantee performance and spend. Mott MacDonald have also agreed to apply a core set of output indicators for each grant from the 18-month point of implementation for the country grant programme in 2021. Relevant output indicators will also be agreed and applied for the regional grants.

Learning

Learning occurs at multiple levels throughout the Fleming Fund portfolio. The Itad contract includes a Learning and Dissemination plan to support adaptive management, inform decision making and make early findings and results accessible to stakeholders. This year the Fleming Fund has undergone a review of its adaptive management approach with the support of Mott MacDonald and Itad. Guidance to the adaptive management approach has been developed and there are plans to extend the approach to encompass all delivery partners.

In August 2020 Itad facilitated a reflections session to (1) revisit learning acquired from the delivery of the programme so far, evaluation outputs, and other adaptive management processes, (2) reflect on what has been done to incorporate this learning into adaptations of the programme so far, and (3) what more can and should be done to improve programme delivery and support the achievement of the intended outcomes of the Fleming Fund.

The Managing for Effectiveness (October 2020) review conducted by Mott MacDonald found that whilst there is a lot of learning taking place at both Mott MacDonald and grantee level it can be strengthened. There have been a number of examples where Mott MacDonald has applied learning. Mott MacDonald is feeding lessons learnt from Country Grant 1s into Country Grant 2s. For example, in Country Grant 1, it was recognised that ensuring clinician buy-in to AMR surveillance is essential for sustainability. In response, outputs targeting more meaningful engagement and inclusion of clinicians within the surveillance system have now been included in later Country Grant 1s and are being included across all Country Grant 2 Requests for Proposals (RFPs). However, it reported that learning opportunities should be seized upon both at the implementation level (e.g. grantee-to-grantee learning) and centrally within Mott MacDonald (e.g. reflection what is working and what is not).

Recommendations:

Develop an overarching Fleming Fund results framework that can track progress against the revised ToC, the revised GHS ToC (pending), and which can crucially measure contribution to outcomes in time for Phase II.

Develop a portfolio wide adaptive management workplan and approach in time for a Phase II.

Further country visits (or virtual visits, depending on restrictions) to be planned for 2021 as part of the Annual Review process, including different Fleming Fund countries, and ideally more than one.

Sustainability

Sustainability has been considered from the inception phase of the Fleming Fund programme with Mott MacDonald. We have worked to improve the approach to sustainability using best practise and suggestions from Itad. Further changes have been made to the Sustainability Analysis /Comprehensive Stakeholder Analysis (SA/CSAs) reports to include the vision of sustainability for each country and to ensure UK Government contacts in country are given the opportunity to comment. The Fleming Fund

received 14 SA/CSAs in 2020. A review of the Fleming Fund Sustainability approach was carried out in September with our Mott MacDonald, Itad and DHSC with further actions to strengthen the sustainability approach. During this year's Delivery Partner Event in October a day was dedicated to sharing and discussing the Fleming Fund approach to sustainability with delivery partners.

Itad's evaluation findings reveal that sustainability is still a core Fleming Fund priority but that there has been greater focus on delivering sustainability in Country Grants than in the Fellowships Scheme or Regional Grants. Country Grantees and Host Institutions have not discussed sustainability plans with governments. Itad noted that most grantees did not have explicit methods of measuring or targets for sustainability and acknowledged that sustainability was identified as hard to measure. Itad concluded that the strategy is beginning to emerge but that there was scope to:

- Detail how exit strategies would be delivered and when
- Develop sustainability measures and milestones for Country Grants, Fellowships and Regional Grants

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