Microbiology Society written evidence to the House of Commons International Development Committee: Future of UK Aid Inquiry

Summary

1. Despite placing science and technology at the heart of the Integrated Review and making tackling climate change and biodiversity loss its number one international priority for 2021 and beyond, the strategic targeting of UK aid spending shows a disconnect between the Government's rhetoric and its actions.
2. Reductions in funding for scientific research not only have a hugely damaging impact on short-term outcomes for research projects but compromise the long-term ability of the UK to act as a leader in addressing the global challenges highlighted in the Foreign, Commonwealth and Development Office's (FCDO) seven priority areas, including efforts against COVID-19.
3. The short-sighted 'cut once, cut deep' strategy threatens the UK's trustworthiness and credibility as a partner of choice and could prove particularly disruptive in the year that the UK acts as President of the G7 and COP 26. By the time the fiscal situation allows more aid spending, other countries will have filled the leadership void (including within the seven priority areas) with more budget and longer-term commitment, leaving the UK out of step with its international counterparts.
4. While the COVID-19 pandemic has highlighted the importance of investing globally in infectious disease research and that 'a health crisis somewhere is a health crisis everywhere', the cuts in aid spending will have a negative impact upon the silent pandemic of antimicrobial resistance (AMR). In its strategy, the FCDO fails to recognise that global challenges are interlinked – by cutting segments of funding, the Government is in fact creating a greater and more expensive set of problems in the future.
5. Under 2015 legislation, the Government is required to meet the UN target of spending 0.7 percent of Gross National Income (GNI) annually on Official Development Assistance (ODA). The Microbiology Society urges the Government to meet its engagement, reverse the decision to reduce aid spending, and re-instate the lost funding now.

Introduction

6. The Microbiology Society is a membership charity for scientists interested in microbes, their effects and their practical uses. It is one of the largest microbiology societies in Europe with a worldwide membership based in universities, industry, hospitals, research institutes and schools. Our members have a unique depth and breadth of knowledge about the discipline. The Society's role is to help unlock and harness the potential of that knowledge.

7. We welcome the opportunity to inform the International Development Committee's timely inquiry. For the first time since 2013, the UK will not meet the UN target of spending 0.7 percent of GNI on ODA. In addition to being extremely damaging to the research base, the spending reductions directly contradict the Government's ambition to become a "science superpower" [1] and undermine the UK's assumption in 2021 of the G7 presidency and host of the COP 26 conference on climate change. We share the concerns of the International Development Committee's Chair, Sarah Champion MP, that the FCDO's announcement provides "limited understanding" of the areas the Government intends to prioritise for its "shrinking aid pot" [2].

8. Our members and the scientific community more generally have paved the route out of the COVID-19 pandemic. From the rapid generation of vaccines to the discovery of new uses of drugs, UK researchers have had a real impact on the lives of millions of people around the world [3]. The decision to decrease investment in science could not have come at a worse possible time – it throws away years of work in building a strong and internationally-leading science base and threatens to undo progress in tackling global challenges.

9. Our submission presents evidence relevant to the 'strategy' and the 'impact of the changes' clusters of the inquiry's terms of reference. Case studies are included to illustrate the profound destruction caused by cutting funding to existing projects and partnerships.

Strategy

The strategic targeting of UK aid spending, including the focus areas set out by the FCDO's seven global challenges and their alignment with the conclusions of the Integrated Review

10. The strategic targeting of UK aid spending shows a disconnect between the Government's rhetoric and its actions [4]. Despite placing science and technology at the heart of the Integrated Review and making tackling climate change and biodiversity loss its number one international priority, the Government has allocated 0.5 percent of GNI for ODA in 2021. It is estimated total ODA will be £10.9 billion in 2021, down from £14.5 billion a year before [5]. While final allocations will not be confirmed until 2022, UK Research and Innovation (UKRI), UN agencies and NGOs have announced spending reductions to specific countries and programmes. Such funding decisions undermine the UK's ability to address the global challenges highlighted in the FCDO's seven priority areas, including efforts against COVID-19.

11. In a joint statement, a group of 200 UK charities and aid organisations have highlighted that the lack of detail around the cuts leaves hugely important questions unanswered [6]. Our members face similar challenges when navigating funding options. Dr Mara Lawniczak, for example, leads a lab at the Wellcome Sanger Institute focused on malaria and mosquito genomics. She was recently successful in petitioning the Medical Research Council to have a grant reconsidered to be non-ODA. The cuts that had been announced to her collaborative project taking place in Mali were reversed. Dr Lawniczak regrets that this has not been the case for every affected award and continues to draw attention to the immense damage the cuts have caused.

12. The COVID-19 pandemic has highlighted the importance of investing in infectious disease research globally. However, the cuts to aid funding will have a significantly negative impact

upon the serious global healthcare challenge of AMR – a 'silent pandemic' that will affect millions globally, often in lower-to-middle income countries (LMICs). While the Integrated Review promises to 'strengthen domestic and international efforts to combat the threat posed by increasing antimicrobial resistance' [1], the FCDO's seven priority areas fail to identify AMR as part of the global challenges for which 'the UK can make the most difference' [7].

13. The Government's strategy which consists of a "temporary" reduction to the aid budget until "the fiscal situation allows" a return to spending 0.7 percent of GNI on ODA [5], coupled with a spending focus on countries in which "the UK's development, security, and economic interests align" [7] appears to be vague, short-sighted and oblivious to the interlinked nature of global challenges:
    - So far, the Government has not indicated the fiscal metrics or circumstances which would allow the UK to return to spending 0.7 percent of GNI on ODA [8].
    - By the time the fiscal situation allows more aid spending, others such as China, the US and the EU, will have filled the leadership void with more budget and longer-term commitment, building on a narrative of not working with the UK as it cannot be trusted to honour its funding and networks. In the long term, this decision will cost far more than it saves.
    - Global challenges are deeply interconnected and the COVID-19 pandemic has shown that a health crisis somewhere is a health crisis everywhere. Our ability to address these issues is directly correlated to our ability to understand their nature and to mobilise funding at the scale needed. By cutting segments of funding from entire research areas and regions of the world, the Government is in fact creating a greater set of problems for the future.

Whether these focus areas address the most pressing global development challenges

Area 1: Climate change and biodiversity

14. There is a danger in the FCDO's approach of considering climate change and biodiversity in isolation of other societal issues, such as AMR. Scholars have acknowledged that the commonalities of climate change and AMR are not limited to their urgency, severity and global dimension. They are also interconnected, with climate change being a contributor to AMR, for example through the spread of disease vectors [9].

15. Multidisciplinary research teams have been impacted by the aid cuts and the decision to focus spending on priority areas. The One Health Regional Network for the Horn of Africa (HORN), for example, is a training and research programme funded by UKRI and the Global Challenges Research Fund (GCRF) that focuses on One Health – the concept that the health and wellbeing of people is linked to the health of animals and the environment. HORN's mission is to improve the health and wealth of the people of the Horn of Africa by increasing the local capacity to undertake high-quality multidisciplinary research into the interactions between people, livestock and the environment. The project experienced a funding cut of approximately £765,000 (9.7 percent) from its expected total funder contribution of approximately £7.9

million, and was not able to fully account for delays arising due to the COVID-19 pandemic by way of a project extension.

Area 2: Global Health Security

16. For years, UK scientists have been using cutting-edge genome sequencing to track outbreaks of infectious diseases and to better understand how pathogens spread and evolve. Thanks to this legacy and the tireless work of all involved, when SARS-CoV-2 emerged, the UK rapidly became a world leader in sequencing the virus. Of all the coronavirus genomes that have been sequenced worldwide, nearly half have been sequenced by the COVID-19 Genomics UK Consortium (COG-UK) [10].

17. The COVID-19 pandemic is included within the 'global health security' priority area of the FCDO's spending strategy, and the prime minister has previously hailed the UK for having "by far the best genomic sequencing ability in the world" meaning that the UK is "better able to identify new strains […] than any other country" [11]. But here again there appears to be a disconnect between what is being said and what is being done by the Government. Professor Wendy Barclay, Head of the Department of Infectious Disease and Chair in Influenza Virology at Imperial College London, warns that: "If we want to be sure that we get the best information about the evolution of SARS-CoV-2 and other pathogens overseas, we need to help invest in setting-up good capability in those countries, because it makes sense for individual countries to collect and sequence their own samples. Cuts in ODA funding will counter that being achieved".

18. The following case studies illustrate how researchers who have been fighting the pandemic are now facing drastic funding cuts:

    - The UKRI GCRF One Health Poultry Hub (the Hub) is a five-year £20 million interdisciplinary research programme led by the Royal Veterinary College and comprising 27 partner institutions in ten countries. It works on public health risks linked to intensification of chicken production in Asia and beyond, including zoonotic viruses (avian influenza), diarrhoeal diseases and AMR. COVID-19 is the most recent pandemic to emerge from the interactions of people and animals in food production systems, and it is the study of these interactions together with the molecular tracking and tracing of viral and bacterial pathogens that is the focus of the Hub. When COVID-19 struck, the Hub was able to rapidly divert expertise into pandemic response and SARS-CoV-2 research in the UK and Asia, whilst maintaining its longer-term priorities and goals. For example, Hub-funded staff at the University of Oxford worked under the direction of Professor Oliver Pybus, a Hub investigator and key contributor to the COG-UK consortium. On 31 March 2021, Hub Director Professor Fiona Tomley was told that the budget for 2021– 2022 was to be reduced from a profiled spend of £4.7 million to a capped limit of £1.5 million – a reduction of almost 70 percent, to take effect the next day, 1 April 2021. Professor Pybus and Professor Tomley have commented: "The Hub is an integrated international consortium and this level of cut is truly devastating. Jobs in the UK and abroad are at risk and this includes researchers with years or decades of specialist technical expertise in the surveillance, genomics and epidemiology of

emerging pathogens. These skills are essential to our current pandemic response and to the post-pandemic world".

- The UKRI GCRF/Newton Fund 'Capacity building reliable diagnostic and epidemiological tools to confront the spectre of a COVID-19 epidemic in refugee communities in northern Uganda' is an 18-month £573,000 project. It began in August 2021 to transfer knowledge around COVID-19 diagnostics and genome variant sequencing, well established in the UK, to developing settings, especially pertaining to communities supporting large refugee populations at the northern Uganda/South Sudan border. Following the ODA cuts announcement, the project's allowance was reduced to a third of the original budget, putting incredible strain on partnerships while still having to deliver meaningful information on the extent of the spread of COVID-19 in an area where little prior knowledge existed. The University of Salford covered much of the resulting shortfall from internal funding. Although this intervention was very much welcomed, it impacted researchers' ability to support other projects and created additional administration, as research contracts had to be renegotiated. Professor Richard Birtles, Chair of Biomedicine at the University of Salford and co-investigator said, "Critically, this project was intended to support our colleagues' response to COVID-19. That the cuts impacted this activity undermines the global efforts to bringing this pandemic under control, and flies in the face of the 'none of us will be safe until everyone is safe'. Furthermore, in the absence of any meaningful vaccine sharing, much of Africa is facing a new wave of pandemic without the tools that have proven key to infection control in the UK".

19. The 'global health security' priority area of the FCDO's spending strategy's focus on COVID-19 should not overshadow other global health challenges, some of which have in fact been exacerbated as a result of the pandemic. The COVID-19 pandemic has led to an increased use of antibiotics, which ultimately will lead to higher bacterial resistance rates that will impact the burden of disease and deaths during the pandemic and beyond [12]. In India, for example, the sharp rise in black fungus cases has been linked to the overprescription of steroids and antibiotics triggering secondary infections and antibiotic resistance across the country [13].

    - Dr Colin Sutherland is Co-Director of the London School of Hygiene and Tropical Medicine (LSHTM) Malaria Centre and Vice-President of the British Society for Parasitology. Recently he has been leading a bilateral project between the UK and Ghana, focused on evaluating African malaria parasite isolates for evidence of reduced drug susceptibility. For the 12 months from April 2021 to March 2022, the project's one-year budget of £179,000 has been cut by £120,000, with only a few weeks' notice of the change. From April 2022 until the project's end in June 2024, there is no guarantee that the funds will be made available, potentially resulting in a further cut of £394,000. About the impact of the spending reductions, Dr Sutherland said, "My collaborator in Ghana and I have been seeking funding for several years – this was our first major grant together. Much damage has also been done to my London research group and to my institution, which specialises in global health. UK scientists working on a number of ODA-related research projects will be made redundant". He also expressed concerns for the wider research-base: "The ODA cuts will have a detrimental impact on the countries in

which many of us work and on UK scientists, especially early-career researchers training in the study of infections of global health relevance".

Area 3: Science and Technology

20. The Government's commitment to make £251 million of research and development (R&D) investments across all seven themes of the spending strategy, with £38 million targeted directly at science and technology is welcomed. However, it remains very opaque at this stage. This FCDO's focus appears to be on new innovations to tackle development challenges, including innovations in satellite imagery and artificial intelligence (AI) to support humanitarian response [14]. Deploying AI against infectious diseases may assist in creating better mechanisms for pattern tracking and disease prevention, but it is only one part of the solution and it must go hand in hand with real-world scientific interventions such as education, vaccines, diagnostics and novel drugs that can help those in desperate need in LMICs. Projects including both components have been impacted by the cuts in aid spending:

    - Dr Aubrey Cunnington is the Head of the Section of Paediatric Infectious Disease and co-convener of the Network of Excellence in Malaria at Imperial College London. His group recently received funding from the UKRI GCRF Digital Innovation for Development in Africa (DIDA) scheme to create a network focused on bringing new digital diagnostics for infectious diseases into practice in Africa. The group envisaged these tools transforming the ability to deliver high quality diagnosis at the point-of-care and linking diagnosis with disease surveillance to enable better targeting of interventions. The DIDA scheme funded the formation of this network in phase one with the perspective that it would be able to apply for up to £3 million of research funding in a phase two. However, just before the launch of phase two, the network was told that it could no longer apply for phase two funding due to the cuts in the ODA budget. Dr Cunnington explained the consequences of losing the opportunity to apply for funding: "This network has 60 partners from 11 countries and we had spent a whole year developing the relationships and planning how we would achieve our aim, and how to have the best chance of securing phase two funding to help us. Obviously, we were devastated to hear that the UKRI scheme had been cut, and also that the ODA cuts more generally would dramatically reduce other opportunities to carry out this important work. Overall, I think it is immoral and short-sighted to make these cuts; they will have a huge negative impact on global health research".

Impact of the changes

Impact upon communities in lower income countries and upon organisations implementing UK ODA programmes

21. The impact of the aid spending changes upon funding organisations is likely to be felt in the longer term, when funding effectively runs out. Money shortages could lead to job losses, which would be particularly damaging for the future generation of researchers who have already been impacted by the pandemic. The Development Studies Association warned that removing research opportunities from this key cohort would do disproportionate harm to

individuals, to the future of the profession and therefore to future research and innovation [15].

22. Science progresses through collaboration and knowledge sharing. Dr Tina Joshi, Lecturer in Molecular Microbiology at the University of Plymouth, highlighted how such advances are now compromised: "Without collaborating with researchers globally, including in LMICs where the ODA funding comes in, the AMR problem will only get worse, especially when climate change is factored in".

23. As highlighted in point 13, by the time the fiscal situation allows more aid spending, other countries will have filled the leadership void (including within the seven priority areas), with more budget and longer-term commitment, impacting the UK's reputation as a research partner of choice.

24. Dr Aubrey Cunnington summarised the many impacts of the new funding strategy in the following quote: "The ODA cuts really undermine the credibility of our country to partner with LMICs in research and will undoubtedly have negative impacts on careers of researchers, health and economic development in LMICs. They will also have negative impacts for our country, as they risk setting back progress by many years in the control of major diseases like malaria (increasing the future cost of aid that will be needed to restore progress) and they will impair our ability to detect future pandemics which are most likely to arise in LMICs".

Final remarks

25. According to the 2015 International Development Act, the UK is required to meet the UN target of spending 0.7 percent of GNI annually on ODA [16]. However, this has not prevented the Government from allocating only 0.5 percent of GNI for ODA in 2021 as a 'temporary measure'. In a recent review, the Independent Commission for Aid Impact has described the funding strategy as a 'cut once, cut deep' approach 'based on single-point and outdated GNI forecasts' [17]. Coupled with the FCDO's decision to focus spending 'only on countries in which the UK's development, security, and economic interests align', the overall spending strategy appears to be vague, short-sighted and oblivious to the interlinked nature of global challenges. Therefore, and in the light of the evidence presented here, the Microbiology Society urges the Government to meet its engagement, reverse the decision to reduce aid spending, and re-instate the lost funding now.

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