Independent Commission for Aid Impact

UK aid to agriculture in a time of climate change

A review

June 2023

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Overall review scores and what they mean

GREEN — Strong achievement across the board. Stands out as an area of good practice where UK aid is making a significant positive contribution.

GREEN/ AMBER — Satisfactory achievement in most areas, but partial achievement in others. An area where UK aid is making a positive contribution, but could do more.

AMBER/ RED — Unsatisfactory achievement in most areas, with some positive elements. An area where improvements are required for UK aid to make a positive contribution.

RED — Poor achievement across most areas, with urgent remedial action required in some. An area where UK aid is failing to make a positive contribution.

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The UK's work on aid to agriculture in a time of climate change has been mainly relevant, with many examples of effective interventions, although it has not been sufficiently coherent. Budget reductions and strategic drift have reduced the relevance, coherence and effectiveness of UK efforts.

The agriculture sector provides livelihoods for the majority of the world's poorest. While climate change is impacting food production and livelihoods, agriculture is also a major contributor to global warming. UK aid to agriculture is provided through delivery programmes by the Foreign, Commonwealth and Development Office (FCDO) (formerly the Department for International Development (DFID) and the Foreign and Commonwealth Office) and investments by British International Investment (BII) (formerly CDC Group plc), while agricultural research is funded by FCDO and the Department for Science, Innovation and Technology (DSIT) (formerly the Department for Business, Energy and Industrial Strategy (BEIS)).

DFID/FCDO's delivery programmes have been well targeted at inclusive growth and poverty reduction, with growing attention to climate change. They have frequently been ambitious and innovative, making serious efforts to integrate climate and nutrition in the commercial agriculture portfolio. BII's statutory requirement to realise a return on investment led to less focus on direct poverty reduction and fewer incentives for integrating climate, gender and nutrition, although attention to these has improved. DFID/FCDO's agricultural research has been highly relevant to development challenges, much more so than that funded through the BEIS/DSIT Global Challenges Research Fund (GCRF).

The 2015 *Conceptual framework on agriculture* has provided DFID/FCDO with a clear approach for an agricultural development portfolio focused primarily on supporting commercial opportunities for smallholder farmers, while also continuing to support the resilience of subsistence farmers and providing opportunities for those that are ready to exit agriculture. Reorganisations, leadership churn and successive crises have eroded this strategic clarity. Some technical capacity has been lost in recent years and there is not yet a coherent agenda on climate and agriculture across government. International partners still value the UK's thought leadership and the generation and use of evidence, but the UK is drawing upon a dwindling reputation.

We found strong results from innovative approaches, with positive impacts on people's livelihoods and agency and some contributions to gender equity. Short intervention periods and poorly designed exits may undermine the sustainability of some results, and while some programmes and investments contributed to climate resilience, other results are unlikely to be sustained, or may even exacerbate climate vulnerability. UK-funded agricultural research for development, particularly that managed by DFID/FCDO, has contributed new knowledge and achieved some development impact, while funding rules for the GCRF hampered its ability to promote development impact.

Individual question scores

Question 1

Relevance: Does the UK have a credible approach to supporting agriculture?

Question 2

Coherence: Does the UK have a coherent approach to ODA-funded agriculture?

Question 3

Effectiveness: Is the UK's support for agriculture achieving its intended outcomes on inclusive economic growth and poverty reduction, food and nutrition security and climate resilience?

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Acronyms and glossary

Acronym	Definition
AR4D	Agricultural research for development
BBSRC	Biotechnology and Biological Sciences Research Council
BEIS	Department for Business, Energy and Industrial Strategy (dissolved in February 2023 and separated out into the Department for Energy Security and Net Zero, the Department for Science, Innovation and Technology, and the Department for Business and Trade)
BII	British International Investment (formerly CDC Group)
BRACC	Building Resilience and Adapting to Climate Change in Malawi
CABI	Centre for Agriculture and Bioscience International
CAPR	Commercial agriculture portfolio review
CASA	Commercial Agriculture for Smallholders and Agribusiness programme
CFA	Conceptual Framework on Agriculture
CGIAR	Formerly the Consultative Group on International Agricultural Research
CIRAD	Agricultural Research Centre for International Development
CLIC	#ClimateShot Investor Coalition
Defra	Department for Environment, Food and Rural Affairs
DFID	Department for International Development (merged with the Foreign and Commonwealth Office in September 2020)
DSIT	Department for Science, Innovation and Technology (established after the dissolution of BEIS in February 2023)
ESG	Environmental, social and governance standards
FCO	Foreign and Commonwealth Office (merged with the Department for International Development in September 2020)
FCDO	Foreign, Commonwealth and Development Office (established after the merger of the Department for International Development and the Foreign and Commonwealth Office in September 2020)
G7	The international Group of Seven: Canada, France, Germany, Italy, Japan, the UK and the US.
GAFSP	Global Agriculture and Food Security Programme
GCRF	Global Challenges Research Fund (in February 2022 it was announced that the GCRF and two other ODA-financed research and development funds would be discontinued. In December 2022 it was announced that a blended ODA and non-ODA International Science Partnership Fund would form part of the replacement for the ODA research and development funds, although full details have yet to be confirmed)
IATI	International Aid Transparency Initiative

Acronym	Definition
ICF	International Climate Finance
IDRC	International Development Research Centre
IMSAR	Improving Market Systems for Agriculture in Rwanda
IPCC	Intergovernmental Panel for Climate Change
MADE	Market Development in the Niger Delta
MEL	Monitoring, evaluation and learning
MTIP	Malawi Trade and Investment Programme
NERC	Natural Environment Research Council
ODA	Official development assistance
OFSP	Orange-fleshed sweet potato
POSA	Programme of Support to Agriculture in Rwanda
PROSPER	Promoting Sustainable Partnerships for Empowered Resilience
RCUK	Research Councils UK
SDGs	Sustainable Development Goals
SIARC	Support to the International Agriculture Research Centres
SILTPR	Sustainable Inclusive Livelihoods through Tea Production in Rwanda
SIVAP	Small-Scale Irrigation and Value Addition Project
SPARC	Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises
UKRI	UK Research and Innovation

Key term	Definition
Agriculture	All activities relating to crop and livestock production.
Agricultural extension services	Services, often provided by government agencies, private or third sector organisations, that provide farmers with technical advice and training and often also support access to agricultural inputs and other agricultural services.
Agricultural inputs	Resources used in agricultural production such as fertiliser, seeds, chemicals and equipment.
Agribusiness	Any business involved in farming or farming-related commercial activities including production, processing and distribution.
Agrifood	All activities relating to the production and dissemination of food and non-food agricultural products.
Centrally managed programme	ODA-funded programme that is managed from FCDO headquarters in the UK.

Key term	Definition
Challenge fund	A competitive financing mechanism for allocating funding to innovation projects that offer a social return, often with some expectation of commercial viability and a matching contribution from the grantee.
Climate adaptation	Changes to processes, practices and structures in order to adjust to the current or expected effects of climate change.
Climate-smart agriculture	Approaches that simultaneously improve agricultural productivity and incomes, strengthen resilience to climate shocks and/or adapt to changing conditions, and reduce and/or remove greenhouse gas emissions where possible.
Commercial agriculture	Producing crops and livestock for sale.
Conference of the Parties (COP)	The main decision-making body of the United Nations Framework Convention on Climate Change.
Enabling factors	Investments such as infrastructure, private sector development and financial initiatives that are not directly agriculture-related but enable agricultural development.
Food security	When all people at all times have economic access to sufficient quantities of safe and nutritious food to meet their dietary needs.
Greenhouse gas (GHG)	Greenhouse gasses, such as carbon dioxide (CO2) and methane (CH4) contribute to global warming by absorbing infrared radiation emitted from the earth's surface and reradiating it back to the earth's surface.
Nutrition-sensitive agriculture	Includes interventions anywhere in the food system, from production to processing and distribution, to improve nutritional outcomes.
Off-farm activities	Processes and jobs relating to agriculture that occur beyond the farm, usually at the middle and end of the value chain, such as processing, distribution and sale.
Paris Agreement	An international agreement on climate change to limit global temperature which was adopted by 196 countries in 2015.
Private sector development	A range of approaches that are based on the underlying assumption that economic opportunities for the poor are best generated by promoting growth in the private sector.
Smallholders	Farmers on 'small-scale' farms that are under two hectares in size.
Smallholder commercialisation	A process whereby farmers transition from largely subsistence activities – growing food for their own consumption – to growing food for sale to markets, thereby contributing momentum to broader economic growth.
Value chain	The activities required to bring an agricultural product from production to the consumer. Value is added through activities such as processing, packaging and distribution.

Executive summary

In 2021, during its presidency of COP26, the UK led a call for action to transform global food and agriculture systems. It urged focus on sustainable agriculture that would provide nutritious, affordable food for all while restoring ecosystems, building climate resilience and reducing climate emissions. At COP27 leaders reaffirmed the call for greater collaboration and investment in transforming the world's food systems in the face of climate change. These priorities reflect growing awareness that progress towards the Sustainable Development Goal of Zero Hunger is faltering, that climate change is accelerating and that the two are linked.

The UK spent an estimated £2.6 billion in bilateral aid to agriculture between 2016 and 2021, the last year for which robust data are available. This included funding for programmes delivering direct development interventions, agricultural research programmes and aid-funded investments in agricultural businesses. Delivery and research programmes of the Foreign, Commonwealth and Development Office (FCDO) (formerly the Department for International Development (DFID) and the Foreign and Commonwealth Office (FCO)) accounted for the majority of this spending. The former Department for Business, Energy and Industrial Strategy (BEIS), now the Department for Science, Innovation and Technology (DSIT), also funded a significant amount of agricultural research. Investments in agribusinesses were made by the UK's development finance institution, British International Investment (BII) (formerly CDC Group).

The purpose of this review is to assess how well the UK has used such significant funding to support agricultural development in a time of climate change. It examines whether the UK's approach to funding is credible, is relevant to best practice, and supports climate adaptation. It considers whether the different approaches taken by the UK have been internally coherent and how well they have fitted with those of other international funders and partner governments. Finally, the review assesses whether these activities have been effective, at both the programme and the portfolio level.

Our methodology includes a literature review, country case studies of UK programming in Malawi, Nigeria and Rwanda, programme desk reviews, and engagement with UK officials, experts, donors and citizens in Malawi and Rwanda.

Relevance: Does the UK have a credible approach to supporting agriculture?

The UK has used aid to support agriculture through a variety of delivery models and several government departments and bodies. A common focus of these diverse programmes has been to support commercial agriculture, particularly helping smallholder farmers to access markets and to improve their agricultural production in order to engage in commercial activities. This approach is based on evidence that smallholder commercial agriculture generates inclusive growth in rural economies.

DFID/FCDO's delivery programmes have appropriately targeted their interventions at key challenges in agriculture and its enabling environment. In our case study countries, we saw sophisticated, innovative and ambitious programmes that supported agricultural development while reducing poverty. Many of these programmes helped smallholders to engage with markets by improving their access to agricultural inputs, reducing barriers to selling their produce and stimulating demand.

BII's statutory requirement to realise a return on investment meant that it tended to reduce risk by investing in the growth of large, well-established firms. There is good evidence for BII's contributions to business growth, although the evidence for job creation is variable and evidence for other development benefits is limited. Until relatively recently, BII has lacked strong incentives to integrate additional priorities such as nutrition, gender or climate and environmental considerations into its investment decisions. The UK's investment portfolio has therefore exhibited weak relevance in these important themes of our review. This has improved since BII adopted a new development impact framework and published strategies on food and agriculture and on climate change in 2020.

Official development assistance (ODA)-funded agricultural research from 2016 to 2021 was delivered by both FCDO (formerly DFID) and the former BEIS (now DSIT). FCDO has considerable expertise in funding

applied agricultural research for development impact. FCDO and DFID funded long-standing international research centres, such as CGIAR (formerly the Consultative Group on International Agricultural Research), with histories of delivering agricultural research of high quality and development relevance. By contrast, most of BEIS' spending was channelled through new funds, in particular the Global Challenges Research Fund (GCRF), established in 2016. Initially, the GCRF was implemented mainly through the research councils, with UK Research and Innovation (UKRI) taking a lead role after it replaced Research Councils UK (RCUK) in 2018. Focused primarily on supplying funding to UK universities and research institutes, the research councils and RCUK had limited expertise and prior experience of ODA-funded research to draw on when the GCRF was launched in 2016. The GCRF's funding mechanisms were built for research reflecting the interests of UK academics rather than the interests of developing countries or researchers in the Global South. Changes to the GCRF's operating arrangements, following an ICAI review in 2017, improved the development relevance of later awards, but by the time these changes came into effect, most of the GCRF's funding had already been committed.

The climate relevance of the UK's work on agriculture has increased dramatically over the period of our review, albeit starting from a very low base. The agriculture sector is highly vulnerable to climate change, and is the third-largest source of climate emissions in the global economy. It is therefore surprising that early strategic documents paid little attention to climate change. Consequently, few agriculture programmes in the early phase of our review period contained interventions directly addressing climate change. Over time, more DFID/FCDO delivery programmes had a focus on climate and drew funds from earmarked International Climate Finance. While this is a positive development, there is a risk that programmes integrate climate change concerns only superficially or retrofit climate relevance into programmes, with variable success. While DFID/FCDO's portfolio of delivery programmes have improved their relevance on both climate and gender, we found little attention in the programme design to how gender shapes climate vulnerability.

Overall, we have awarded a **green-amber** rating for relevance, despite sometimes insufficient attention to climate, nature and nutrition in delivery programmes and investments, and constraints arising from UKRI's focus on UK-led agricultural research.

Coherence: Does the UK have a coherent approach to ODA-funded agriculture?

The 2015 *Conceptual framework on agriculture* developed by the former DFID provided a degree of coherence between delivery programmes supporting smallholder commercialisation, those stimulating growth and jobs in the rural economy, and social protection and resilience-building programmes supporting smallholders not yet ready for commercialisation. In our country case studies, we saw layered and innovative country portfolios with the potential for transformative change. In Malawi, for example, DFID/FCDO programmes supporting private sector policy reforms and improving export markets were complemented by programmes building resilience in agricultural communities, while investments by BII and AgDevCo, a specialised investor in Africa's agriculture sector funded by DFID/FCDO, BII and other donors, supported medium and large agribusinesses.

Senior-level coordination between BII, FCDO and AgDevCo improved over time, as evidenced by BII's 2021 investment in AgDevCo. However, we found instances of missed opportunities for coordination, even when this had been built into business cases. There were few incentives in-country for information sharing and joint action. Lack of effective operational coordination between BII and FCDO hampered, for instance, the UK's ability to engage effectively along agricultural supply chains.

There was a high degree of volatility in the UK's agricultural research portfolio between 2016 and 2021, with a rapid increase in spending in the first years. In 2016, DFID dominated aid to agricultural research. By 2017, spending on agricultural research had doubled, with almost half funded by the former BEIS, mainly through the GCRF. After 2018, funding fell each year. While the GCRF was an ambitious development in the UK's agricultural research offer, its rapid deployment and implementation was destabilising. DFID and GCRF research were not well coordinated in the Fund's early years. Following recommendations from a 2017 ICAI review of the GCRF, coordination improved, but by that point most of the GCRF's funding had been committed.

At the global portfolio level, internal coherence has been undermined by successive disruptions to staff availability and capacity, from Brexit, the COVID-19 pandemic, the merger of DFID and FCO, and ODA reductions. A sense of 'strategic drift' in the agriculture portfolio was compounded by successive changes in budget allocations and in ministerial priorities, and a reduced role for experts in decision making. We spoke to many officials who recognised the importance of advancing an ambitious agenda around climate-resilient food systems. We found little confidence among them that the UK government would currently be able to deliver.

Internal coherence at the country portfolio and programme level was dramatically affected by ODA reductions starting in 2020. In Malawi, ODA reductions undermined the delivery of what had been a highly effective and coherent programme, Building Resilience and Adapting to Climate Change (BRACC). Several components were either downsized or removed altogether, undermining the programme's ability to deliver on its intended objectives. We found similar examples of country programmes and portfolios being curtailed and coherence being lost in Rwanda and Nigeria. In Rwanda we saw a previously exemplary country portfolio, with an impressive level of complementary and mutually reinforcing interventions, hollowed out by budget reductions, a loss of staff and programme closures.

Despite ODA reductions, the UK has retained some capacity to influence partner governments, donors and multilateral institutions. Although it has lost a significant number of expert agricultural advisers, the UK continues to be viewed as a technically competent development ally. It has used this reputation to its advantage, for example, taking influential positions on the steering committees of multilateral initiatives such as the Global Agriculture and Food Security Programme. Capable and dynamic in-country staff have been able to use the UK's reputation to leverage influence and improve cohesion among donors working in the agricultural ecosystem. However, with funding reduced, the UK has been drawing on this reputation, and there is a significant risk that its influence will degrade rapidly in the near future.

Increasing fragmentation and weak synergies between programmes, the impact of ODA reductions on complementary interventions, and declining influence with partner governments merit an **amber-red** rating for coherence.

Effectiveness: Is the UK's support for agriculture achieving its intended outcomes on inclusive economic growth and poverty reduction, food and nutrition security and climate resilience?

The UK's ODA-funded agricultural delivery programmes and investments were successful at creating employment and raising incomes. Farmers we spoke to in Malawi and Rwanda confirmed that they used increased incomes to buy local goods and services, contributing to rural growth. UK investments in agribusinesses also supported business growth and job creation, although we found limited evidence for wider pro-poor development impacts.

Achieving transformational change in agriculture requires long-term, patient engagement. UK delivery programmes were often too short to achieve such change. Where programmes were extended, such as the Propcom Mai-karfi programme in Nigeria, results were more likely to achieve scale and sustainability.

The integration of climate and nutrition was variable across delivery and investment programmes. Over time, programmes increasingly included climate-relevant interventions, although often with a low level of ambition. In Rwanda, for example, the Improving Market Systems for Agriculture in Rwanda (IMSAR) programme's work on agricultural value chains encouraged farmers to make specific adaptations, such as adopting climate-smart crop varieties and technologies. But IMSAR interventions did not address climate risk in agricultural supply chains or help build the systemic resilience of smallholders. By contrast, programmes such as BRACC in Malawi and Sustainable Inclusive Livelihoods through Tea Production in Rwanda used innovative, community-based approaches to climate action which offered better and more sustainable results for smallholders.

While we found DFID/FCDO-funded agricultural research to be effective, with high developmental impact, the effectiveness of research funded through the GCRF was hampered by UKRI's funding rules. This undermined

the GCRF's ability to help researchers in the Global South build capacity and achieve impact. We found that climate and environmental considerations were variably integrated into the UK's agricultural research portfolio. While DFID/FCDO research programmes had a very significant and direct focus on climate action, it was not always a significant theme in GCRF awards. This improved over time, and GCRF awards included some very innovative and sophisticated climate-related research.

Approaches towards gender improved. Most DFID/FCDO programmes in our sample were aware of gender best practice, targeted women in interventions and provided gender-disaggregated monitoring data. BII also improved its approach to gender in new investments following the development of its 2020 impact framework, although gender remains under-addressed in its legacy investments. The approach to integrating gender into the GCRF portfolio of research was initially poor, but improved after 2019, following a recommendation from ICAI. But by this time, 75% of awards in the agriculture portfolio had already been made.

The UK has been largely effective in monitoring, evaluation and learning (MEL), although this was not consistent across the portfolio. UKRI's approach to MEL in the GCRF largely focused on the overall portfolio, while a hands-off approach to post-award management may have undermined UKRI's ability to understand how its procedures limited the GCRF's development impact. BII's initial approach to MEL in its investments was of mixed quality and coverage, in line with its strategic focus at the time, with few of its earlier investments monitoring benefits to poor people beyond job creation. DFID/FCDO's approach to MEL was more effective and consistent, although a major opportunity for learning may have been missed as DFID/FCDO has never attempted to synthesise learning from across its portfolio.

Towards the end of our review period, we saw significant reductions in the effectiveness of UK programmes in agriculture due to ODA cutbacks. The cutbacks were particularly severe for FCDO's delivery programmes. Scaling back and cancelling programmes negatively affected the portfolio's ability to deliver against intentions. ODA reductions also made it more difficult to focus on cross-cutting priorities such as nutrition, gender, climate change and MEL. Since MEL is an important component of the UK's influencing and thought leadership efforts, reduced MEL spending threatens to undermine the UK's comparative advantage as a donor.

We rate the effectiveness of the UK government's agriculture portfolio as **green-amber**, reflecting the effective contributions to poverty reduction of UK programmes and investments over 2016-21. However, we note the sometimes superficial approaches to climate change and nature, the GCRF's insufficient attention to the developmental effectiveness of agricultural research, and a declining focus on MEL.

Recommendations

Recommendation 1: The government should ensure that all agriculture programmes and investments have an integral focus on climate change and nature.

Recommendation 2: All commercial agriculture programmes and investments should be monitored for nutritional outcomes.

Recommendation 3: The government should act to secure the UK's influence and thought leadership on agriculture.

Recommendation 4: FCDO, BII and AgDevCo should look for operational synergies and complementarities between programmes and investments to maximise effectiveness, building on their comparative advantages.

Recommendation 5: DSIT and UKRI should integrate learning about development effectiveness, including from previous ICAI reviews, into future ODA-funded agricultural research.

1. Introduction

1.1 Agriculture both contributes to climate change[1] and is adversely affected by its effects.[2] Addressing the inaugural UN Food Systems Summit in September 2021, UN Secretary-General António Guterres told his audience that achieving the Sustainable Development Goals (SDGs) would require a transition to sustainable, nutritious, equitable and secure food systems.[3] At the COP26 summit in Glasgow in November 2021, participants recognised the need to reduce climate emissions from agricultural systems and strengthen climate resilience and sustainability.[4] At COP27 in November 2022, food and agriculture were included in the text of climate negotiations for the first time.[5] This was broadly welcomed, but most policymakers and scientists acknowledge that transforming global food systems is an incredibly complex task, and the current level of funding and coordination is far below what is required to achieve such a transformation.[6]

1.2 The impacts of climate change on agriculture, food security and nutrition are already felt across the world.[7] The world's least developed countries are the worst affected, as they rely more on agriculture for livelihoods and have low climate resilience.[8] The UK's 2022 *International development strategy* established climate change, nature and global health as one of the UK's four overarching priorities for its work on sustainable development.[9] The 2023 refresh of the *Integrated review* mapped out seven initiatives for delivering the UK's development strategy, including leading a campaign to improve global food security and nutrition. The review established tackling climate change, environmental damage and biodiversity loss as the UK's top thematic priority.[10]

1.3 Despite agriculture's importance for many developing countries and its very close links to climate change (in both cause and effect), agriculture is not a top priority for international donors. The share of global official development assistance (ODA) spent on agriculture has fallen from 25% of global bilateral aid spending during the 1980s to around 4% today.[11] The UK has been part of this downward trend. Of the G7 countries, it is currently the fifth-largest bilateral donor to agriculture, in both relative and absolute terms.[12]

1.4 This review assesses UK aid for agriculture, with an overarching focus on how the UK's agriculture portfolio integrates climate change and climate action. The portfolio has three main types of interventions: delivery programmes, research and investments. First, delivery programmes are aid-funded programmes with direct development interventions as their primary objective. These can be delivered through multilateral or bilateral channels and as part of multi-country or country-specific programmes. Second, agricultural research is a significant portion of UK aid spending on agriculture.[13] And third, aid-funded investments in agriculture are made by the UK's development finance institution, British International Investment (BII). Across these three intervention types, the review considers how the UK has used its position to influence other donors and multilateral institutions and catalyse international action on agriculture.

1.5 This review assesses UK aid to agriculture since 2016, when the UK's last major strategy for agricultural development was launched. The review assesses aid from the Foreign, Commonwealth and

1 "Chapter 5: Food security", *Special report on climate change and land*, Intergovernmental Panel for Climate Change, 2019, link.
2 *Climate change and agriculture*, Houses of Parliament POST note 600, May 2019, p. 1, link.
3 *Secretary-General's Chair Summary, Statement of Action on United Nations Food Systems Summit*, United Nations, 23 September 2021, link.
4 *Koronivia joint work on agriculture: draft conclusions proposed by the chairs*, United Nations Framework Convention on Climate Change, 6 November 2021, p. 2, link.
5 *Koronivia joint work on agriculture*, Food and Agriculture Organisation of the United Nations, 2023, link.
6 See, for example, *Negotiations at COP27 fail to deliver transformative plan for food systems, but hope still prevails*, World Wide Fund for Nature, 18 November 2022, link; *Perspective: what might it cost to reconfigure food systems?* Thornton, P., Chang, Y., Loboguerrero, A. and Campbell, B., Global Food Security 36, 2023, p. 5, link.
7 *Future of food: Shaping a climate-smart global food system*, World Bank, 2015, p. 5, link.
8 *The state of food security and nutrition in the world 2018*, Food and Agricultural Organisation of the United Nations, 2018, p. 38, link.
9 *The UK government's strategy for international development*, Foreign, Commonwealth and Development Office, May 2022, p. 17, link.
10 *Integrated review refresh: responding to a more contested and volatile world*, HM Government, 2023, pp. 26 and 27, link.
11 Aid (ODA) by sector and donor, OECD.Stat, 2023, link.
12 *Ending hunger sustainably: Trends in official development assistance (ODA) spending for agriculture*, Ceres2030, p. 2, link.
13 Aid for agricultural research was last reviewed by ICAI ten years ago: *DFID's support to agricultural research*, Independent Commission for Aid Impact, 2013, p. 3, link.

Development Office (FCDO) (formerly the Department for International Development (DFID) and the Foreign and Commonwealth Office (FCO)),[14] the Department for Environment, Food and Rural Affairs and the former Department for Business, Energy and Industrial Strategy (BEIS), as well as investment from BII (formerly CDC Group).[15]

1.6 The review considers criteria of relevance, coherence and effectiveness. It addresses the questions and sub-questions set out in **Table 1**. **Box 1** below summarises how the issues explored in this review are related to the SDGs.

Box 1: How this report relates to the Sustainable Development Goals

The Sustainable Development Goals (SDGs) are a universal call to action to end poverty, protect the planet, and ensure that all people enjoy peace and prosperity. Agriculture cuts across a wide range of sectors and issues, including the SDGs relating to poverty, health, decent work and economic growth. The following SDGs are of particular relevance to this review:

Goal 2 is to end hunger, achieve food security and improved nutrition and promote sustainable agriculture. It relates in a very clear and direct way to agricultural development. Goal 2 targets include increasing resilient agricultural practices, maintaining seed and crop diversity and boosting investment in agriculture and agricultural research.

Goal 13 relates to taking urgent action to combat climate change and its impacts, including strengthening resilience and adaptive capacity to climate-related hazards. Agricultural interventions that are adaptive to climate change fall under this goal.

Goal 15 covers the protection, restoration and sustainable management of land to reverse degradation and halt biodiversity loss. Conservation agriculture, agroforestry, and sustainable agriculture interventions are relevant to this goal.

Table 1: Our review questions

Review criteria and question	Sub-questions
1. **Relevance:** Does the UK have a credible approach to supporting agriculture?	• How well does the UK aid approach to agriculture take into account the expected impacts of climate change? • How well does the UK aid approach to agriculture support inclusive economic growth and poverty reduction? • In a time of climate change, is the UK making relevant ODA investments in agricultural research?

14 DFID and FCO merged to form FCDO in September 2020.

15 In 2023 BEIS was split into three new departments, including the Department for Science, Innovation and Technology, which now manages the BEIS portfolio of agricultural research. BII was formerly CDC Group plc; the organisation changed its name in November 2021.

Review criteria and question	Sub-questions
2. **Coherence:** Does the UK have a coherent approach to ODA-funded agriculture?	• How coherent and coordinated are programmes across UK ODA-spending departments and arm's-length bodies? • How well has the UK worked with and influenced partner countries and multilateral institutions on agriculture?
3. **Effectiveness:** Is the UK's support for agriculture achieving its intended outcomes on inclusive economic growth and poverty reduction, food and nutrition security and climate resilience?	• How well have farmers, consumers and people affected by agriculture programmes been engaged in the design of UK aid programmes? • How well are UK aid programmes helping to build sustainable agricultural practices which meet needs and respond to environmental concerns? • To what extent is learning and evidence from research programmes being taken up and utilised in-country?

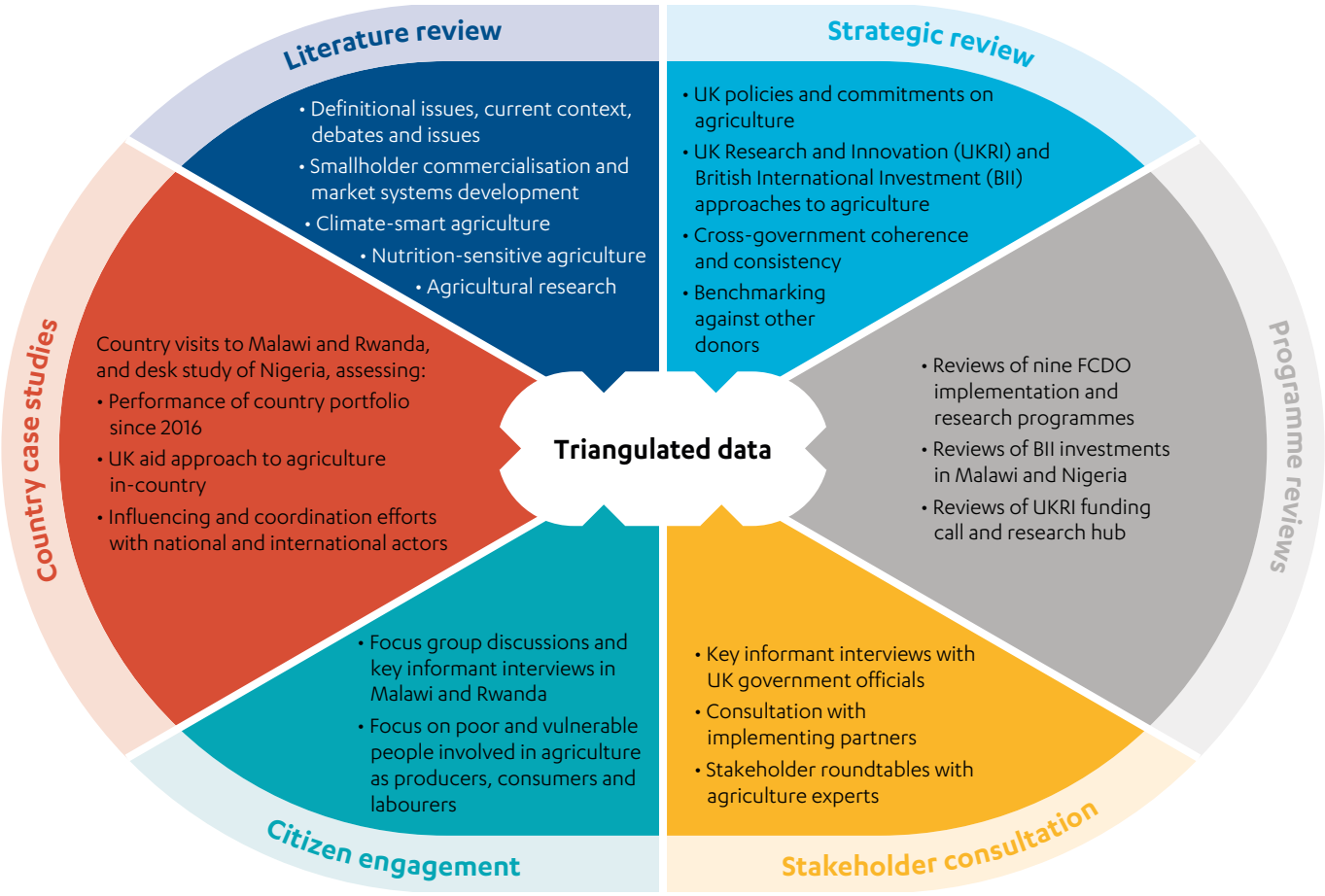
2. Methodology

2.1 The methodology for our review involved six components (see **Figure 1**) to gather evidence against our review questions and ensure sufficient triangulation of findings:

- **Literature review:** provides an overview of the peer-reviewed and grey literature on the review's main topics to identify 'what works' in agricultural development. The literature review is published separately on the ICAI website.[16]
- **Strategic review:** a desk-based review of key UK strategies, policies, commitments and guidance notes concerning agriculture, climate and development. This review included two benchmarking exercises comparing the UK's approach to agricultural delivery programmes and research with other major international donors.
- **Programme reviews:** desk reviews of agricultural delivery programmes, research programmes, and investment. This included seven delivery and research programmes managed by the Foreign, Commonwealth and Development Office (FCDO), a selection of direct equity and intermediated investments in Malawi and Nigeria made by British International Investment (BII), and a sample of six grant awards made under the Global Challenges Research Fund (GCRF) and managed by UK Research and Innovation (UKRI).
- **Stakeholder consultation:** interviews with a wide range of stakeholders including current and former UK government officials, implementers of UK ODA-funded programmes, firms receiving UK ODA investment, representatives of other donors, and agricultural experts. We also conducted two stakeholder workshops with independent experts, one on climate change and agriculture, the other on agricultural research.
- **Country case studies:** we reviewed three UK aid country portfolios through visits to Malawi and Rwanda, and a desk-based study of Nigeria. In each country we assessed the UK's aid programme, including investments, delivery and research programmes, in terms of relevance, coherence and effectiveness.
- **Citizen engagement:** we consulted with people directly or indirectly affected by UK agriculture aid in Malawi and Rwanda. The consultations were conducted by national research partners, supported by citizen engagement experts to ensure that rigorous safeguarding and research protocols were followed.

16 *UK aid to agriculture in a time of climate change: literature review*, Independent Commission for Aid Impact, June 2023, available on the ICAI website, link.

Figure 1: Our methodology



2.2 Our methodology and approach were independently peer-reviewed. The methodology and sampling process is detailed in our approach paper.[17] Some of the main limitations to our methodology are listed in **Box 2**.

Box 2: Limitations of the methodology

Scope: 'agriculture' potentially includes a very broad range of issues, interventions and approaches. While the sector benefits from aid supporting enabling factors, such as infrastructure, private sector development, and financial initiatives, our review focuses on aid badged as agriculture. Forestry and fisheries are not included in this review. ICAI is planning a future publication covering UK aid spending on marine protection.[18] Forestry has also been covered by ICAI in a previous review.[19]

Sample: our review covers a diverse portfolio, split between several ODA-spending departments with divergent approaches. Our relatively small sample of a large and varied portfolio is informative, rather than representative. As our programme and investment sample focuses on aid badged as agriculture, it likely under-represents total UK support to the sector (see data quality, below). Our country case studies include some agriculture-related private sector, trade and finance programmes to understand their coherence with the agriculture-badged country portfolio. Our approach to agricultural research funded by the former Department for Business, Energy and Industrial Strategy (BEIS) focused on the GCRF, and we sampled grants made after 2018 and managed by UKRI. We excluded other avenues of BEIS spending, and GCRF funds managed by Innovate UK, as information was not available during our evidence gathering stage.

Data availability: less evidence was available from the earlier years of our review period. Key stakeholders

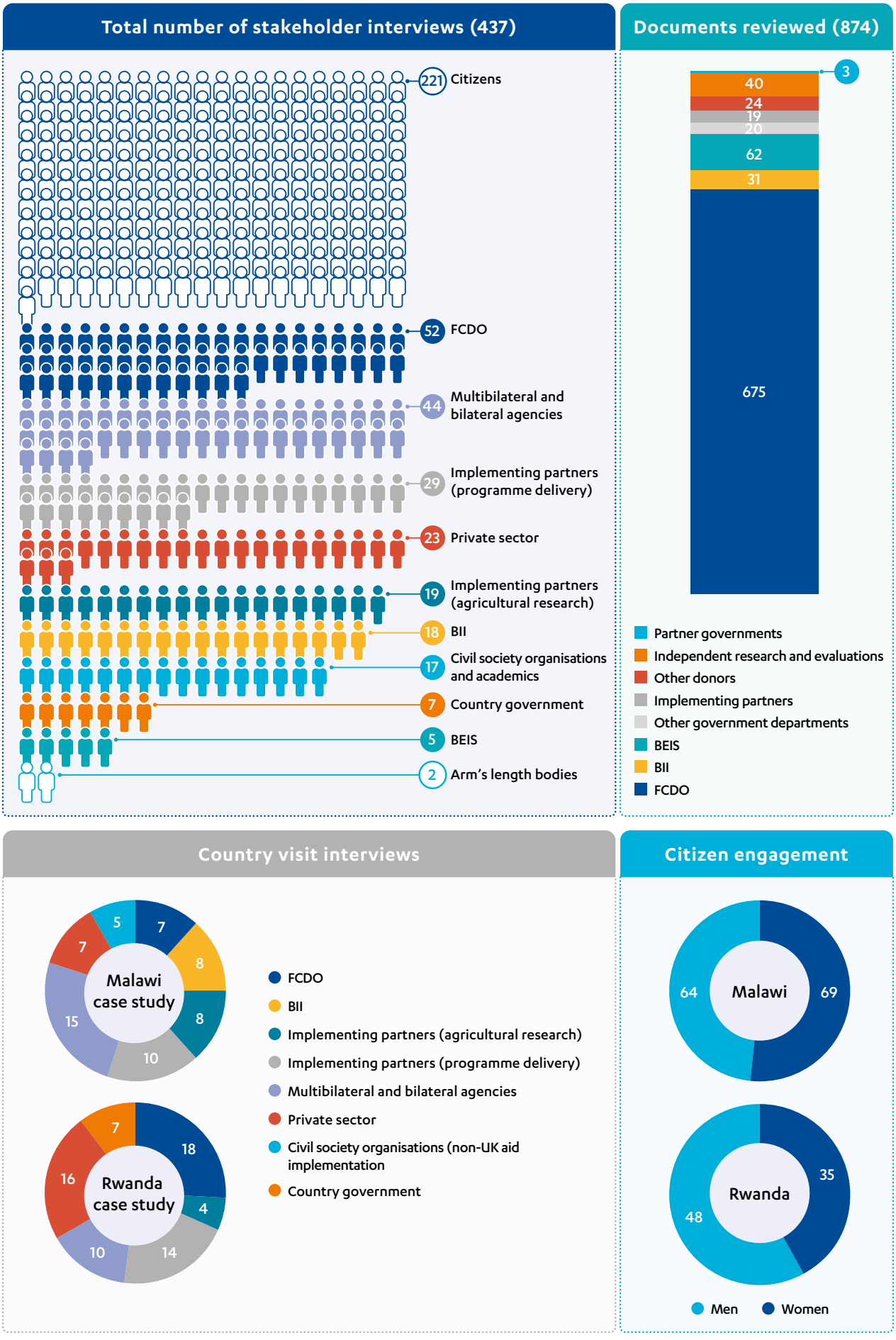
17 *UK aid to agriculture in a time of climate change: approach paper*, Independent Commission for Aid Impact, February 2023, link.
18 See Future work plan, Independent Commission for Aid Impact, 2023, link.
19 *International climate finance: UK aid for halting deforestation and preventing irreversible biodiversity loss*, Independent Commission for Aid Impact, 2021, link.

able to provide insights on earlier projects had moved on, and for some countries we were unable to access strategic documents such as country development diagnostics and country business plans covering the years before the merger of the Department for International Development (DFID) and the Foreign and Commonwealth Office in 2020. We overcame this to an extent by interviewing national FCDO staff with longer experience of working in-country, and through analysis of publicly available literature from the pre-merger period of our review.

Data quality: spending badged as agricultural development and agricultural research was obtained from International Aid Transparency Initiative (IATI) databases. This under-represents total UK spending on agriculture, as some agriculture projects were badged under other sectors. For example, some agricultural development projects were wholly or partially badged as food assistance or small and medium enterprise development. Similarly, much agricultural research was reported as environmental research or general, multi-sector research. We use IATI data as indicative of DFID/FCDO delivery programmes, BII investment, and BEIS research spending.

2.3 We conducted 87 interviews in the UK, and over 120 interviews with 200 individuals in Malawi and Rwanda. We also heard from over 200 individuals in Malawi and Rwanda through our citizen engagement exercise. We reviewed close to 900 documents across our methodological components. **Figure 2** details the reach of our documentary and stakeholder consultation.

Figure 2: Breakdown of stakeholder interviews, country visit interviews, citizen engagement and documents reviewed



3. Background

Global context

3.1 Agricultural development supports Sustainable Development Goal (SDG) 2, which aims to eliminate all forms of hunger everywhere by 2030. Investments in agricultural development have long focused on productivity gains. In the post-war period, this investment helped to increase global food supply much faster than the growth in global population.[20] Hundreds of millions of people nevertheless face hunger and malnutrition two decades into the 21st century.[21]

3.2 Most poor people live in rural areas and rely on agriculture for their livelihoods.[22] Investing in agricultural development can therefore be an effective way of targeting rural poverty reduction by increasing income and employment.[23] Raising agricultural yields and flows of produce to markets can also ease the poverty of food consumers by increasing supplies and bringing down food prices.[24] The SDG targets have concentrated minds on how to reduce poverty rapidly in low-income countries.[25] Agriculture has been recognised as an engine of broader economic development that can contribute to growth in the industrial and service sectors.[26]

3.3 It is estimated that women provide at least half of the agricultural workforce, yet find it more difficult than men to sell crops for profit and to access land, agricultural extension services,[27] finance, and resources used in agricultural production (known as agricultural inputs) such as fertiliser and labour.[28] Such barriers mean women are less resilient to climate-related shocks. Despite increasing recognition of a gendered dimension to climate vulnerability in agriculture, it is feared that funding for climate action does not sufficiently target women farmers or the specific issues they face.[29]

3.4 Long-term climate change and the increased frequency and intensity of extreme climate events are already affecting agricultural production and food security. Climate change will reduce food production even under the Intergovernmental Panel for Climate Change's (IPCC) most optimistic scenario of an average 1.5°C warming. Pressures from climate change on all areas of agriculture, including food production, livestock health and water availability, will increase even further under the IPCC's less optimistic scenarios.[30] Global finance for assisting agriculture to adapt to climate change is far below estimated requirements to address these pressures.[31]

20 Gross per capita production index number: Food, production indices dataset. FAOSTAT database, Food and Agriculture Organisation of the United Nations, 2022, link.

21 *The state of food security and nutrition in the world 2022. Repurposing food and agricultural policies to make healthy diets more affordable*, Food and Agriculture Organisation of the United Nations, International Fund for Agricultural Development, UNICEF, World Food Programme and World Health Organisation, 2022, link.

22 *End poverty in all its forms everywhere*, UN Statistics Division, 2019, link; *For up to 800 million rural poor, a strong World Bank commitment to agriculture*, World Bank Comment, 12 November 2014, link.

23 *Agriculture, structural transformation and poverty reduction: eight new insights*, Editorial, World Development 109, 24 May 2018, p. 413, link.

24 *Population growth, increases in agricultural production and trends in food prices*, Southgate, D., The Electronic Journal of Sustainable Development, 1(3), 2009, pp. 29-35, link.

25 *The Sustainable Development Goals report 2022*, United Nations, 2022, link.

26 *Agriculture is key for economic transformation, food security and nutrition*, Lin, J. Y.. International Food Policy Research Institute blog, 2018, link.

27 Services, often provided by government agencies, private or third sector organisations, that provide farmers with technical advice and training and often also support access to agricultural inputs and other agricultural services. See glossary.

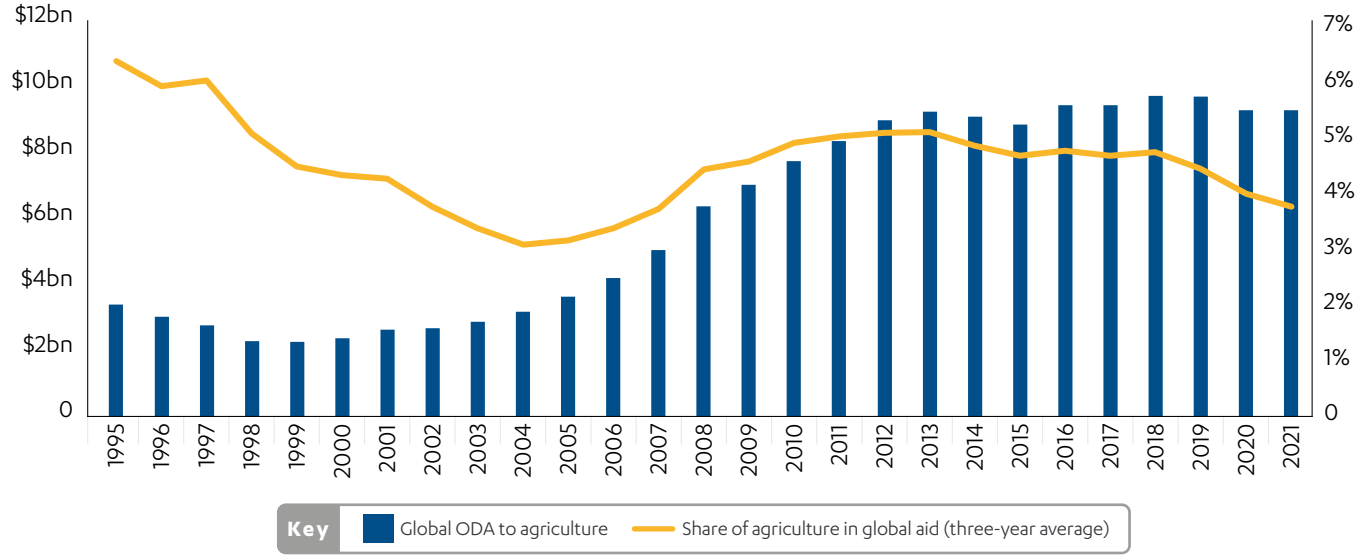
28 *Achieving agricultural sustainability depends on gender equality*, Ignaciuk, A. and Chit Tun, N. A., International Food Policy Research Institute blog, 23 October 2019, link.

29 *Development finance for gender-responsive climate action*, OECD Development Cooperation Directorate, OECD Publishing, Paris, 2022, p. 8, link.

30 *Climate change 2022: Impacts, adaptation and vulnerability*, Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, IPCC, Cambridge University Press, Cambridge, UK and New York, 2022, p. 32, link.

31 "Summary for policymakers" in *Climate change 2022: Impacts, adaptation and vulnerability*, Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, IPCC, Cambridge University Press, Cambridge, UK and New York, 2022, p. 26, link. *Too little, too slow: climate adaptation failure puts the world at risk*, executive summary, UN Environment Programme, 2022, p. v, link.

Figure 3: Global bilateral official development assistance (ODA) to agriculture



Source: Creditor Reporting System (CRS) database, OECD.Stat, link.
Note: Only bilateral ODA is reported on the OECD CRS database, therefore the figure above only reflects trends in global bilateral ODA.

3.5 In our three case study countries – Malawi, Nigeria and Rwanda – most people's livelihoods depend on rain-fed agriculture, which is highly vulnerable to climate impacts. All three countries are classified as highly vulnerable to climate change, with Malawi in the top ten countries exposed to climate risk.[32] Climate shocks affecting agriculture between 2016 and 2021 included extreme storms in southern Malawi in 2019 and 2020,[33] drought in eastern Rwanda in 2016[34] and recurrent droughts in northern Nigeria.[35] Meanwhile, ODA to agriculture in the three countries has been in decline since 2017.

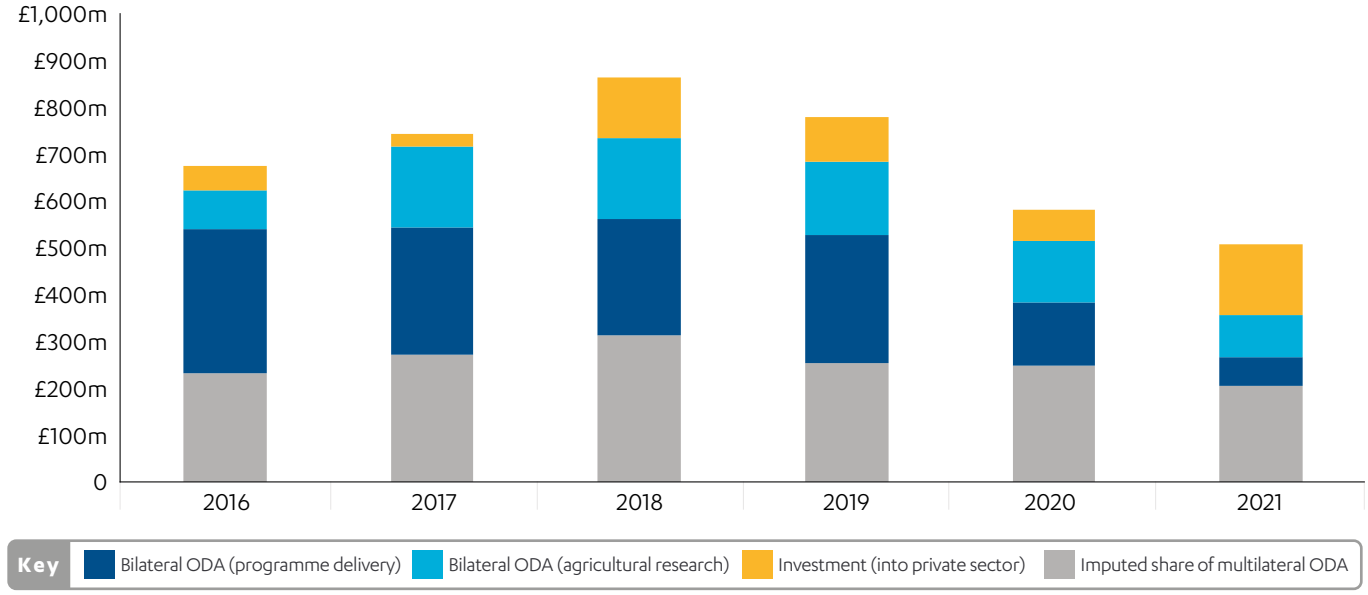
UK aid's approach to agriculture

3.6 While the review relies on evidence about the UK's approach to agriculture since 2016, we have spending figures only up to the end of 2021. Between 2016 and 2021, total UK aid to agriculture was £4.15 billion (see **Figure 4**). This consisted of £2.63 billion in bilateral ODA[36] and £1.52 billion in imputed multilateral ODA.[37]

3.7 In this review we focus our analysis on the UK's bilateral ODA funding, the portion of aid that is managed directly by the UK. We have not attempted to include the UK's imputed multilateral ODA spent on agriculture. We differentiate between spending on agricultural research, investment in agribusinesses and grant-funded agricultural delivery programmes (see **Figure 5**).

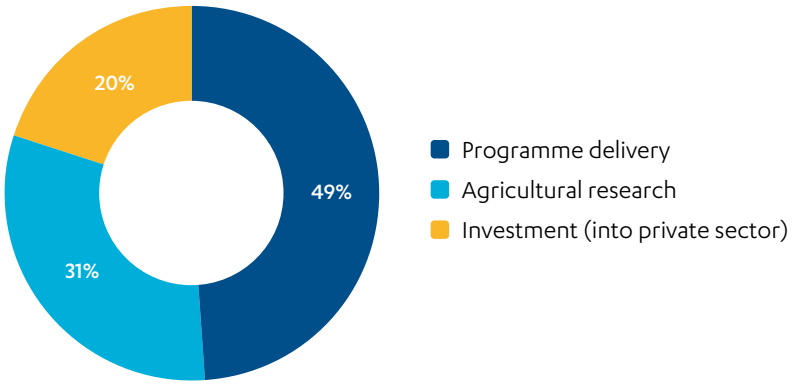
32 Malawi is the fifth most affected country in terms of extreme weather events according to the 2021 Global Climate Risk Index. Although no longer in the top 20 for 2021, Nigeria and Rwanda were ranked 18th and 8th in the 2020 edition of the index. See Global Climate Risk Index, link.
33 *Understanding the impact of sustainable landscape management on farm productivity under intensifying tropical cyclones in Southern Malawi*, Pangapanga-Phiri, I., Mungatana, E. D., Pangapanga, L. and Nkoka, F. S., Tropical Cyclone Research and Review, 2023, link.
34 Climate risk profile: Rwanda Fact Sheet, USAID, 12 February 2019, link.
35 *Impact of climate change on agricultural production in Nigeria*, Kemi, A. O., International Journal of Scientific & Engineering Research, Volume 10, Issue 3, March 2019, p. 258, link.
36 Aid from the UK going directly to a recipient country. This total includes bilateral ODA contracted through multilateral agencies for specific programmes or projects, often called 'multi-bi ODA'.
37 This is the share of the UK's core contributions to multilateral agencies that is estimated to be spent on agriculture. For the purposes of this review this spend is not included in our analysis, although the UK's relationship with the multilateral system is included.

Figure 4: Total UK aid to agriculture, by modality and type, 2016-21



Source: Creditor Reporting System Database, OECD.Stat, link; d-Portal, International Aid Transparency Initiative, link; Statistics on international development: final UK aid spend 2021 and 2017, link.

Figure 5: Type of bilateral UK aid to agriculture, 2016-21



Source: Creditor Reporting System Database, OECD.Stat, link; d-Portal, International Aid Transparency Initiative, link.

3.8 The Foreign, Commonwealth and Development Office (FCDO) sets the strategic direction for much of the UK's aid approach to agricultural development. For most of our review period this was managed by the Department for International Development (DFID), until that department was merged with the Foreign and Commonwealth Office in 2020.

3.9 The most important document setting out the UK's approach to agriculture during our review period was DFID's 2015 *Conceptual framework on agriculture* (see **Box 3**). DFID's 2017 *Economic development strategy* also includes a section on agriculture that was influenced by the direction set out in the *Conceptual framework*.[38] The 2021 *Integrated review* sets out the UK's position on food security and using international trade to encourage sustainable agriculture,[39] while the 2023 refresh of the *Integrated review* commits to the UK leading on food security, nutrition and strengthening global resilience against risks posed by climate change and environmental damage.[40] The 2022 *International development strategy* acknowledges agriculture as a sector where UK expertise can boost sustainable economic growth, but does not comment on it in depth.[41] The UK's *2030 strategic framework for international*

38 See *DFID's conceptual framework on agriculture*, Department for International Development, 2015, link, and *Economic development strategy: prosperity, poverty and meeting global challenges*, Department for International Development, 2017, link.
39 *Global Britain in a competitive age: the integrated review of security, defence, development and foreign policy*, Cabinet Office, 2021, p. 90, link.
40 *Integrated review refresh: responding to a more contested and volatile world*, HM Government, 2023, p. 47, link.
41 *The UK government's strategy for international development*, Foreign, Commonwealth and Development Office, May 2022, p. 9, link.

climate and nature action, published in March 2023, commits to UK leadership on decarbonisation, with agriculture as a priority sector, and building resilience, including by increasing global adaptation finance.[42] A recent speech made by the UK's international development minister outlining a new vision for UK development included priority areas for addressing global hunger by boosting funding for climate resilience, as well as maintaining and championing a focus on agricultural research and investment.[43]

Box 3: DFID's Conceptual framework on agriculture

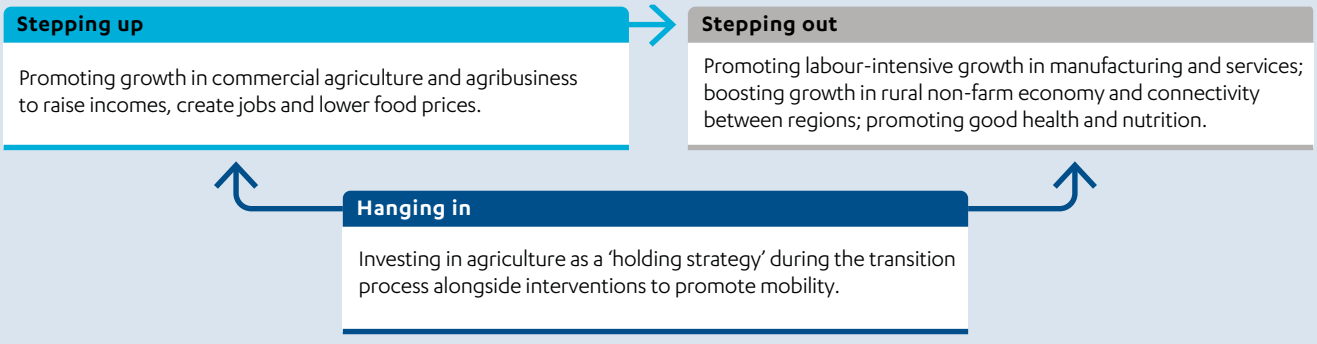
Published in November 2015, the former DFID's *Conceptual framework on agriculture* (CFA) has been the principal document guiding the UK's approach to agricultural programmes since 2016. The CFA set the direction for future programming by synthesising contemporary evidence on opportunities, challenges and risks facing the agricultural sector in developing countries.

The CFA focused on the food and agriculture sector's contribution to three interconnected goals:

1. **Economic growth and poverty reduction:** how agriculture contributes to jobs and higher incomes for the rural poor.
2. **Food security and improved nutrition:** how agriculture leads to reliable access to sufficient, nutritious and safe food.
3. **Sustainable food systems:** how agriculture can become more resilient in the face of climate change and resource scarcity.

The CFA identifies broad programming approaches to support three archetypical livelihood strategies aimed at poverty alleviation and agricultural development. These strategies involve supporting the poorest in rural areas while also helping farmers to build their incomes by increasing the value of their agricultural outputs and, where appropriate, to diversify away from agriculture:[44]

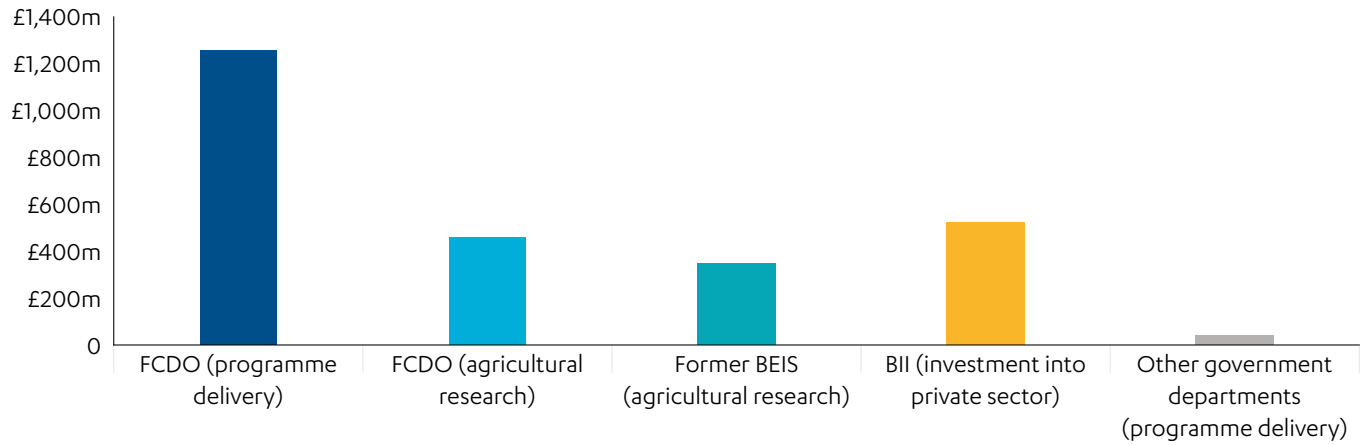
- **Helping farmers 'stepping out':** long-term investment facilitating a transition away from rural agriculture by supporting i) labour-intensive sectors creating off-farm jobs (such as processing or packaging) and ii) rural people seeking to access employment outside of the agriculture sector.
- **Helping farmers 'stepping up':** stimulating agricultural transformation that supports smallholders to engage in commercial agriculture.
- **Helping farmers 'hanging in':** continued support for agricultural livelihoods of rural poor people until conditions are right for them to step up or step out.



The CFA also included three cross-cutting priorities: (i) nutritious and safe food, (ii) resilience to climate change and environmental sustainability and (iii) inclusion and gender.

42 *2030 strategic framework for international climate and nature action*, HM Government, March 2023, p. 7, link.
43 *Future of international development: Minister Andrew Mitchell's speech*, Chatham House, 27 April 2023, link.
44 *Hanging in, stepping up and stepping out: livelihood aspirations and strategies of the poor*, Dorward, A. et al., Centre for Environmental Policy, Imperial College London, 2009, link.

Figure 6: Bilateral UK aid to agriculture by government department, 2016-21



Source: Creditor Reporting System database, OECD.Stat, link; d-Portal, International Aid Transparency Initiative, link.

3.10 While all figures are indicative (see **Box 2** in the **Methodology** section), between 2016 and 2021 DFID/FCDO was responsible for around 65% of UK ODA spend on agriculture, shared between its delivery and research activities (see **Figure 6**).

3.11 British International Investment (BII) represented one-fifth of UK bilateral aid to agriculture from 2016 to 2021, all of it in the form of investments.[45] Investments by BII were governed by its 2017-21 *strategic framework*[46] and, later, by its 2020 *Food and agriculture sector strategy*.[47] BII focused on investments in agribusinesses and related industries to scale up agricultural productivity.

3.12 The former department for Business, Energy and Industrial Strategy (BEIS) (now the Department for Science, Innovation and Technology), oversaw 40% of the UK's aid to agricultural research from 2016 to 2021, which was 13% of total bilateral aid to agriculture. BEIS-funded research, channelled through the Global Challenges Research Fund (GCRF), Newton Fund and other ODA portfolios, was managed by Research Councils UK, which became UK Research and Innovation in 2018. In February 2022 it was announced that no further funding would be available under the GCRF or Newton Fund, and a new International Science Partnerships Fund was announced in December 2022.

3.13 In the **Findings** section of this review, **Part one** covers grant funding for delivery programmes and investments, while **Part two** focuses on research. Delivery and investment are mainly funded through spending by FCDO and BII, with a relatively small amount of spending on agricultural delivery from other ODA-spending departments (see **Figure 6**). Between 2016 and 2021, almost 70% of the UK's bilateral ODA portfolio on agriculture was either grant funding for delivery programmes, mainly from DFID/FCDO, or investments by BII. Over this period, grant funding by FCDO declined while average annual investments by BII increased (see **Figure 7**).[48]

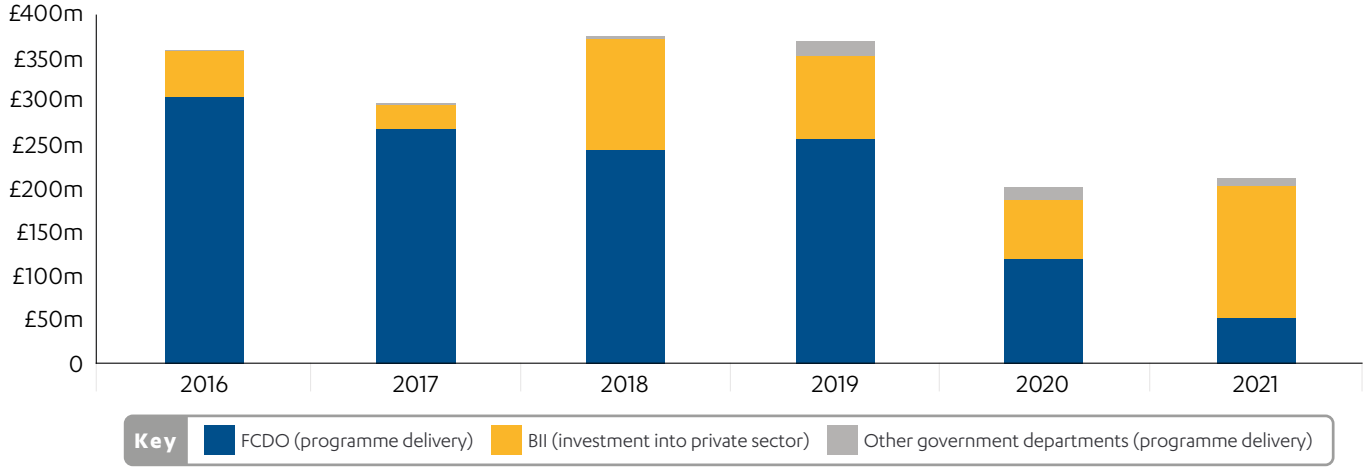
45 This represents the £152 million of investments into agribusinesses and related industries made by BII between 2016 and 2021, as confirmed by data supplied by BII.

46 *Investing to transform lives: strategic framework 2017-2021*, CDC Group plc, 2017, link.

47 *Investing to transform lives: strategic framework 2017-2021*, CDC Group plc, 2017, link; *Food and agriculture sector strategy*, CDC Group plc, 2020, link.

48 It is difficult to draw conclusions from annual figures as BII's investment spending on agriculture typically fluctuates from year to year. However, a three-year rolling average that smooths out fluctuations in annual spending shows that BII's investment spend increased between 2016 and 2021.

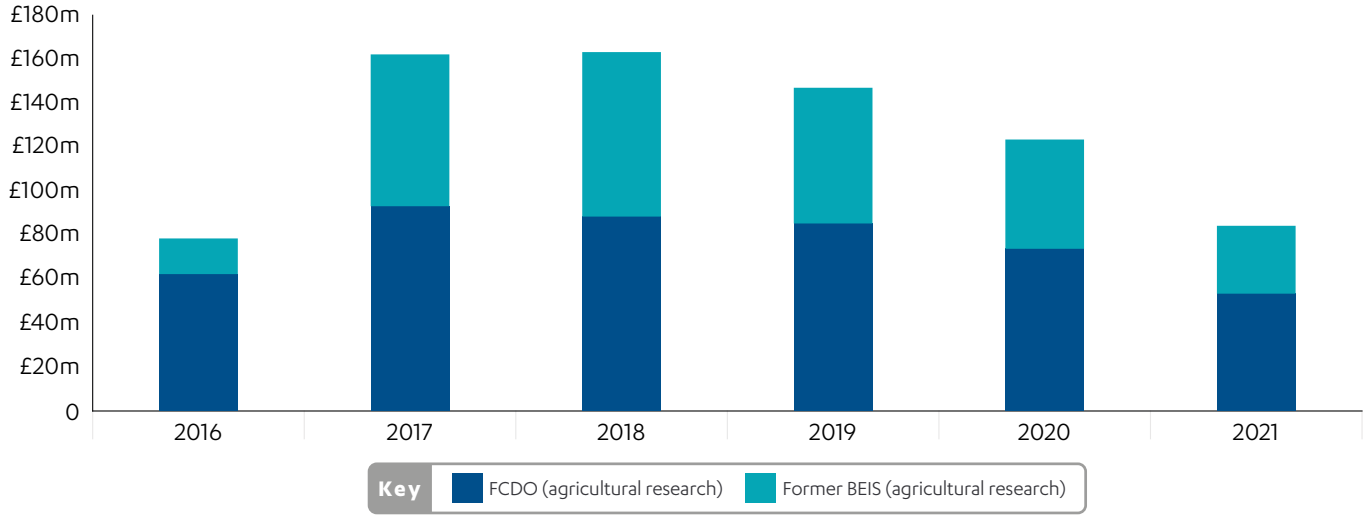
Figure 7: UK bilateral ODA funding for delivery programmes and investment spending by department, 2016-21



Source: Creditor Reporting System database, OECD.Stat, link; d-Portal, International Aid Transparency Initiative, link.

3.14 Overall, agricultural research spending increased rapidly between 2016 and 2018, and has since fallen year on year. The former BEIS first began spending ODA on agricultural research in 2016, initially accounting for 21% of annual spending. This rose to 46% in 2018, then fell to just over one-third by 2021 (see **Figure 8**).

Figure 8: Agricultural research spending by government department, 2016-21



Source: Creditor Reporting System database, OECD.Stat, link; d-Portal, International Aid Transparency Initiative, link.

3.15 We reviewed ten programmes (see **Annex 1**). In total, these programmes spent £791 million over the period of our review and represent a third of the UK's overall agricultural portfolio by spend. In sampling and reviewing this portfolio we prioritised four thematic areas:

- smallholder commercialisation
- climate-smart agriculture
- nutrition-sensitive agriculture
- gender.

For further information about our programme sampling, please see our approach paper.[49] For further information about the thematic areas, please see the relevant sections of our literature review.[50]

49 *UK aid to agriculture in a time of climate change: approach paper*, Independent Commission for Aid Impact, February 2020, p. 6, link.
50 *UK aid to agriculture in a time of climate change: literature review*, Independent Commission for Aid Impact, June 2023, available from the ICAI website, link.

4. Findings

4.1 In this section, we present our main findings on the UK's official development assistance (ODA) for agriculture in a time of climate change. **Part one** looks at agricultural delivery programmes funded by the Foreign, Commonwealth and Development Office (FCDO) (formerly the Department for International Development (DFID)) and investments made by British International Investment (BII). **Part two** covers ODA-funded agricultural research funded by DFID/FCDO and through the Global Challenges Research Fund (GCRF). **Part three** assesses the overall coherence of the portfolio. A summary assessment of the portfolio's relevance, coherence and effectiveness is presented in the **Conclusions and recommendations** section.

Part one: The UK's delivery programmes and investments in agriculture

DFID/FCDO's targeting of smallholder commercialisation was a relevant, innovative and credible approach to poverty reduction

4.2 The 2015 *Conceptual framework on agriculture* (CFA), developed by the former DFID, articulated the department's strategic approach to agriculture by identifying developmental relevance, and goals and priorities for effecting change. The CFA identified three strategies for reducing rural poverty and promoting inclusive growth (see **Box 3**). DFID's agricultural delivery programmes emphasised two of these strategies: helping smallholder farmers to engage in commercial agriculture ('stepping up') and expanding their opportunities for off-farm employment[51] by investing in agribusinesses ('stepping out'). This helped align the work of DFID's rural livelihoods cadre with the department's growing interest in private sector development. DFID's 2017 *Economic development strategy* re-emphasised smallholder commercialisation's role in transforming rural economies, particularly in agriculture-dominated economies.

4.3 The CFA helped align different areas of DFID/FCDO's support for rural poverty reduction. While agriculture programming moved away from supporting subsistence ('hanging-in') farmers, this group was supported through social protection and other resilience-building programmes. Programmes supporting access to financial services, infrastructure, education and economic growth in other sectors also supported the CFA's 'stepping up' and 'stepping out' strategies.

4.4 Programmes in our sample and country case studies used several approaches related to smallholder commercialisation. These included:

- supporting community initiatives to diversify income and build resilience, such as replanting local watersheds and creating small enterprises to process local produce
- overcoming barriers to smallholders' entrance into formal markets, for example by improving their access to seeds that meet buyers' specifications
- overcoming disincentives for private sector firms to work with smallholder farmers, such as by demonstrating aggregation models that improve the reliability of supply
- investing in agribusinesses, enabling them to grow, create off-farm jobs and include more smallholders in their supply chains.

4.5 Smallholders reached by these interventions told us how they had benefited:

51 Employment and activities in the agriculture sector that take place beyond the farm, such as processing and packaging, distribution and sales.

> We had a mindset of cultivating small quantities, because we didn't have a market. Now we have a big market. We cultivate large quantities to satisfy the market. We make more money to buy other types of food.
>
> Woman, farmer, focus group discussion, Rwanda

> Some farmers have been able to buy livestock after harvesting and selling maize or beans from the programme and this is all because of SIVAP [Small-Scale Irrigation and Value Addition Project]. Personally, I built a house with iron sheets, I bought pigs, goats and one cattle because of the scheme; and I am not the only one, a lot of others would also testify.
>
> Woman, farmer, semi-structured interview, Malawi

> My life had previously been difficult due to my disability, but with this project, I am able to hire people to work for me on my tea plantation.
>
> Woman, tea farmer, semi-structured interview, Rwanda

4.6 The department's programming was relevant throughout 2016-21, clearly shaped by the CFA, and frequently ambitious and innovative. In interviews, however, officials told us that changing ministerial priorities have shifted focus away from the CFA's model for agricultural development and poverty reduction. Over our review period, grants and development finance increasingly targeted larger agribusinesses rather than small producers. In principle, such investments can benefit poverty reduction by creating jobs and stimulating economic growth. However, we found mixed evidence that these approaches were substantially benefiting smallholders. More recently, the 2022 *International development strategy* and 2023 *Integrated review refresh* refer to sustainable economic growth[52] and sustainable agriculture,[53] shifting the focus away from specific references to commercial agriculture.

Box 4: Overcoming market constraints in northern Nigeria

The Propcom Mai-karfi programme worked in eight agricultural and non-agricultural rural markets of northern Nigeria between 2012 and 2022. It used market systems approaches to improve market services for smallholders by identifying the constraints and incentives of market actors and facilitating sustainable changes. The programme's first phase improved smallholders' access to fertilisers, tractor hire, seeds and grain storage, among other goods and services. The programme's second phase expanded into conflict-affected areas, testing the feasibility of market-based approaches in humanitarian situations.

Due to ODA budget reductions, Propcom Mai-karfi's endline evaluation was cancelled. However, an independently produced Programme Completion Report found that the programme had delivered significant results in reducing poverty and women's economic empowerment, but was less successful at encouraging humanitarian agencies to deliver market-based solutions. It also found that the best prospects for sustainability came in value chains the programme had engaged with for over seven years, having allowed sufficient time for consolidation and scaling up of activities.

4.7 In Malawi, Rwanda and Nigeria we saw DFID/FCDO programmes targeting smallholders directly that were complemented by programmes addressing key challenges in their enabling environment. In each country, these formed sophisticated, innovative and ambitious attempts to support growth in the agriculture sector. Several such programmes had contributed to transformative change or may yet do so.

52 *The UK government's strategy for international development*, Foreign, Commonwealth and Development Office, May 2022, p. 9, link.
53 *Integrated review refresh: responding to a more contested and volatile world*, HM Government, 2023, p. 27, link.

4.8 In Rwanda, for example, long-standing DFID programmes had helped lower barriers for smallholders to invest in commercial agriculture, particularly by improving their access to finance and formal land tenure. These programmes helped prepare the ground for programmes that supported smallholder commercialisation directly. One programme supporting smallholder commercialisation directly was Improving Market Systems for Agriculture in Rwanda (IMSAR), which helped smallholders to improve yields and quality of produce and facilitated aggregation models that connected farmers with agribusinesses such as food processors. US officials told us that IMSAR's example encouraged USAID to implement their own market systems approach in the country.

4.9 In Malawi we saw how economic growth programmes that were not badged as agriculture had targeted smallholders' enabling environment. For instance, much of the support of the Private Sector Development in Malawi programme for private sector policy reforms and finance for private enterprises supported agricultural enterprises. Similarly, the subsequent Malawi Trade and Investment Programme (MTIP) aimed to improve the country's agricultural exports. By stimulating growth in agribusinesses, both programmes potentially contributed to increased demand for smallholders' produce. These approaches complemented interventions supporting smallholders directly, such as investments made by AgDevCo (a specialised investor in Africa's agriculture sector funded by DFID/FCDO, BII and other donors). Many of these interventions also supported community agribusinesses to adapt to a changing business environment. For example, AgDevCo's support for the Kasinthula sugar cooperative addressed management and financial problems, opening opportunities to create jobs and ultimately benefit from wider business environment reforms.

FCDO's programmes have been largely effective in increasing incomes and creating jobs, particularly when working on a longer time scale

4.10 A recent review of FCDO's commercial agriculture portfolio found that its 35 operational programmes had helped over 19 million farmers improve their incomes and contributed to the creation of over 231,000 jobs between 2015 and 2020.[54]

4.11 Reports from our citizen engagement process were positive about the contribution FCDO's programmes had made to their income and livelihoods:

> "Having livestock and earnings from produce sales provided the much-needed alternative to migration for casual labour in Mozambique."
>
> Man, farmer, focus group discussion, Malawi

> "Before I was making between RWF 70,000 to RWF 200,000. But I am now earning more than one million. The reason why is that I changed the way I grow maize."
>
> Woman, farmer, semi-structured interview, Rwanda

> "I have more means now. I plan ahead of time how I will spend my money, and I no longer depend on my husband to buy stuff for the house."
>
> Woman, farmer, focus group discussion, Rwanda

4.12 One of the underlying reasons for supporting smallholder commercialisation is that farmers with increased incomes buy more local goods and services, contributing to inclusive rural growth. While few programmes monitored such impacts, our citizen engagement suggested that they were indeed happening:

54 *Commercial agriculture portfolio review 2020*, Centre for Agriculture and Bioscience International – Commercial Agriculture for Smallholders and Agribusiness, May 2021, p. 14, link.

> “What changed is that they used to sell small quantities such as one kilogram or two. They used to get money inconsistently, which cannot help them. But now they receive money in a lump sum and can afford to buy products from my shop and I benefit too. I noticed that their profit reaches other people in the neighbourhood because farmers hire labourers who earn income from them, and I get profits too.”
>
> Woman, small enterprise owner, semi-structured interview, Rwanda

> “When farmers get money, our products sell fast. And we restock other products within a short time.”
>
> Woman, small enterprise owner, semi-structured interview, Rwanda

> “Another advantage is that many people now have jobs. People used to travel to other areas to look for money in the past. I received a loan of RWF 2 million, which I used in order to hire more people to do farming activities for me, and those people were also able to meet their household needs.”
>
> Farmer, focus group discussion, Rwanda

4.13 We heard from UK officials and independent experts that achieving transformational results in commercial agriculture takes time. Our literature review confirmed this. Convincing smallholders, enterprises and investors to change their behaviour in a risky sector requires patience. Ensuring such change is embedded and sustainable often takes longer than the typical programming cycle of four to five years. An independent review of Market Development in the Niger Delta (MADE), for example, found that the programme's two-year extension until 2020 allowed the consolidation of market system interventions made between 2013 and 2018. The number of farmers reached by MADE doubled between 2018 and 2020, as activities were scaled up and successful results encouraged additional private sector investment ('crowding in') and copying of behaviour by other farmers. Propcom Mai-karfi (see **Box 4**) was another example of a programme where an extension allowed for deepening impact and sustainability. Few programmes were followed by retrospective evaluations, however, limiting insights into their long-term sustainability and effectiveness.

BII's development impact is less well evidenced, particularly in terms of benefits to smallholders

4.14 BII invests in the growth of commercial farms and large agribusinesses. Investing in the agriculture sector is high-risk. The risk is typically higher when investing in producers but lower when investing in agribusinesses situated further along supply chains, such as those engaged in food processing or manufacturing agricultural inputs. These risks make agriculture a challenging proposition for BII as it has a statutory obligation to realise a return on investment. BII's primary approach is to invest more than £10 million directly in large, well-established businesses. However, there can be limited opportunities to do so in countries with underdeveloped private sectors, such as Malawi and Rwanda. To overcome this constraint, BII uses other models to broaden its options. For example, our sample included smaller indirect investments in Nigerian agribusinesses mediated through a local fund manager.

4.15 In our sample of investments, the analysis of development impact was generally weak and tended to assume anticipated benefits would follow investment. In principle, BII's investments in business growth can benefit the wider economy, such as by generating exports. They may also benefit poor people more directly, for example by creating jobs and stimulating demand for smallholder produce. In practice, we found that BII's reported results contained strong evidence for supporting business growth, although prospects for business sustainability were weakly analysed in some exit documents. However, we saw limited evidence for development benefits beyond job creation, particularly in investments mediated through local fund managers. For example, we saw no robust assessment of benefits such as import

substitution or the reduction of post-harvest losses that were anticipated from some of the investments in our sample which were mediated through a local fund manager. Moreover, evidence for job creation was variable and we saw no analysis as to whether the jobs created met expectations for permanent or decent work, or who benefited from them. For example, a 2019 investment in a shea butter processing firm mediated through a local fund manager would most likely have increased its purchases from independent shea nut collectors, many of whom are women. However, investment documents, developed before BII's revised development impact framework (see below), did not anticipate or monitor this impact.

4.16 Following a recommendation in ICAI's 2019 review of investments by CDC (BII's previous name) in low-income and fragile states,[55] CDC required all new investments to be designed against a new development impact framework. Assessing progress on this recommendation after two years, ICAI concluded in 2021 that new investments were now taking into account certain development impacts satisfactorily, although there remained some areas of weakness, such as inclusion, nutrition and considerations of 'who benefits'.[56] Being quite recent, this greater focus on development impact largely applies to investments made towards the end of the review period.

The monitoring and evaluation of development outcomes across a diverse portfolio of delivery programmes and investments was of mixed quality and coverage, inhibiting learning

4.17 Monitoring, evaluation and learning (MEL) in DFID/FCDO programmes and BII investments was of mixed quality and coverage. Approaches to measuring development impact in DFID/FCDO programmes generally focused on numbers of jobs created, farmers reached or increases in income. There was no consistent approach to measurement and little attention to whether jobs created met accepted definitions of decent work. Few programmes monitored wider impact on inclusive growth. Building Resistance and Adapting to Climate Change (BRACC), in Malawi, was one of the exceptions, providing evidence that increased income among programme participants led to increased spending on goods, services and casual labour in local communities.

4.18 As noted above, BII's reporting of benefits to poor people focused on job creation, and that was of variable quality. Only one investment in our sample reported on development impact beyond jobs created, an investment in Nigeria which attempted to evaluate its impacts on the substitution of rice imports. We note that BII developed a new approach to contextualise its reporting and provide a more comprehensive picture of development impact beyond enterprise growth towards the end of the review period. BII's 2020 impact framework and its 2022 impact score methodology have the potential to introduce consistency and improve monitoring of how well investments reach low-income populations and whether impact is achieved beyond jobs created.[57]

4.19 The UK deployed a wide variety of models and approaches to agricultural development in different contexts and value chains over 2016-21. To this should be added programmes such as Access to Finance Rwanda and MTIP, which address agriculture's enabling environment. The variety of models and approaches constitutes a potentially rich evidence base from which to learn, inform future programming and provide evidence on 'what works where and why' to the wider development community. However, officials told us that inconsistent quality and coverage of MEL information, and a lack of retrospective evaluations of long-term impact, mean that this evidence base is not being developed or exploited to its full potential.

4.20 FCDO has invested in thematic evaluations[58] and annual commercial agriculture portfolio reviews (CAPRs) of its delivery portfolio. The thematic evaluations provide some useful insights, but all of them reported challenges with drawing firm conclusions due to the limited evidence at their disposal. While the CAPRs report on results from across the commercial agriculture portfolio, they do not evaluate

55 *CDC's investments in low-income and fragile states*, Independent Commission for Aid Impact, 2019, p. 50, link.
56 *ICAI follow-up review of 2019-20 reports*, Independent Commission for Aid Impact, 2021, p. 25, link.
57 We note that BII's 2022 impact score replaces its earlier development impact grid and may enable more consistent and systematic monitoring of anticipated benefits to poor people.
58 For example, *Climate smart agriculture thematic review: evaluation report*, Foreign, Commonwealth and Development Office, 28 October 2021, link.

the factors that underlie or hamper these results. Their utility for learning is therefore limited. At the research portfolio level, DFID/FCDO has invested in embedding evaluations into its agriculture research programmes which have generated valuable lessons and are shared externally. However, while these have generated useful insights, they have not evaluated the success of the portfolio as a whole. BII had not conducted any portfolio-wide evaluations to develop empirical learning on effective agricultural investment during 2016-21, although we understand that FCDO's evaluation and learning programme has commissioned an evaluation of BII's food and agriculture portfolio, which it expects to publish at the end of 2023.[59]

4.21 These evidence gaps constrain the UK's ability to capture lessons on success factors in different contexts, make evidence-based decisions and act as a thought leader in the development community.

There are improvements in strategic coherence between FCDO and BII, but opportunities for synergy between FCDO, BII and AgDevCo activities are not regularly being seized

4.22 DFID/FCDO and BII have not always been closely coordinated. A 2019 ICAI review recommended that BII (then named CDC) should work more systematically and regularly with DFID, particularly at the country level, and strengthen engagement with other parts of the UK aid programme.[60] There are indications that closer senior-level discussions have improved strategic alignment since then. An example is BII's recent investment in AgDevCo (see **Box 5**). This follows on from long-term DFID/FCDO support to AgDevCo, amounting to over £152 million during 2016-21. AgDevCo targets high-risk, early-stage firms with finance of between £2 million and £10 million, making it well placed to prepare a pipeline of firms which might, with growth, be suitable for BII investment.

Box 5: AgDevCo investment in agriculture

AgDevCo invests long-term capital in, and provides technical support to, early-stage and higher-risk African agribusinesses. AgDevCo's investments have enabled small and medium enterprises to become more financially sustainable, potentially enabling them to access development finance to fund further growth.

In 2021, BII invested $50 million to help AgDevCo widen and deepen its impact and support continuing financial stability, and to demonstrate BII's openness to investing in higher-risk businesses. BII's investment has improved cooperation and reduced competition between BII and AgDevCo. It has the potential to enable both organisations to leverage their complementary strengths and coordinate investments along agricultural value chains and related services.

We heard from interviews that, following a reduction in grant financing, AgDevCo is shifting towards lower-risk investments. This was expected to be only temporary, until AgDevCo builds up its capital. While AgDevCo will retain an important offer to African agriculture, this new position does leave a significant gap in the market in terms of support for high-risk and early-stage firms.

4.23 After BII's investment we found promising evidence of improved coordination between BII and AgDevCo in countries where both had a footprint. In Malawi, AgDevCo took over the management of BII's investment in a macadamia plantation and bought BII's investment in a sugar plantation. Both were relatively small investments for BII, and these moves reflect AgDevCo's comparative advantage in managing smaller investments and supporting agricultural firms that work directly with smallholders.

4.24 However, we saw more examples of missed opportunities for operational coordination between FCDO delivery programmes and BII and AgDevCo investments. IMSAR is an example of this. IMSAR included both a delivery component with interventions to improve smallholders' access to markets and an

59 This evaluation will form part of a series of multi-year evaluations commissioned by FCDO to evaluate BII's impact in its priority portfolios. One evaluation in the series which has already been made publicly available is *Evaluating the impact of British International Investment's infrastructure portfolio*, Kim, R., Sutherland, Z., Verhoeven, S., Binet, S., Düring, N., Barnett, C., Lemma, A. and Beckmann, L., e-Pact consortium: Itad, Steward Redqueen, Overseas Development Institute, March 2022, link.

60 *CDC's investments in low-income and fragile states*, Independent Commission for Aid Impact, 2019, pp. 27 and 47, link.

investment component, in which AgDevCo provided long-term finance to agribusinesses. IMSAR's business case implies that the two components would collaborate, but did not specify how. In the event there was no collaboration. This was partly because the delivery component started two years after the investment component due to procurement delays. More significantly, there was a lack of financial and contractual incentives for AgDevCo and IMSAR's delivery partners to collaborate. In particular, we were told by the UK government that the programme's design did not offer material value to AgDevCo in making an impactful investment. The absence of effective coordination between development finance investments and grant-based delivery programmes makes it more challenging to develop smallholder-inclusive value chains as well as generate economic growth. Coordination options could, for example, include a delivery programme that trains smallholder farmers and aggregates their produce to supply a firm receiving AgDevCo investment.

The commercial agriculture portfolio's climate relevance has improved rapidly from a low baseline, yet still lacks ambition

4.25 The UK's work on agriculture has included a climate focus for over a decade. However, the UK's strategic direction for climate and agriculture remains unclear. The 2015 CFA conceptualised climate change as a risk to yields, food security and prosperity, but few early commercial agriculture programmes emphasised climate adaptation and resilience. FCDO staff told us a revision of the CFA would now need a more ambitious and systematic approach to climate and environmental considerations that would likely incorporate nature and biodiversity issues. This reflects the department's heightened understanding and prioritisation of these themes.

4.26 The climate relevance of BII's agriculture investments improved between 2016 and 2021, from a low base. Its 2017-21 food and agriculture strategy encouraged inclusion of sustainability issues in investments. However, climate considerations were not routinely included. The level of ambition in BII's earlier approaches to, and reporting of, environmental, social and governance (ESG) standards was also variable. BII's 2020 climate strategy commits all new investments to align with the Paris Agreement on climate change and requires 30% of all annual investment commitments to be climate finance.[61]

4.27 Between 2016 and 2021, DFID/FCDO's commercial agriculture portfolio also improved its focus on the climate crisis. Between 2018 and 2021, the number of DFID/FCDO commercial agriculture programmes using the UK's International Climate Finance (ICF) budget doubled, from 15 to 31. This is a broadly positive indicator and correlates with increasing prioritisation of climate objectives and action by FCDO.

4.28 However, claiming ICF funding does not necessarily mean high performance on climate action. Eight programmes that were operational but not claiming ICF budgets in 2018 were claiming ICF budgets by 2021. Some interviewees expressed concerns that programmes were using ringfenced ICF budgets to secure funding in a context of ODA budget reductions. Some programmes which come under ICF, including the Future of Agriculture in Rwanda and Commercial Agriculture for Smallholders and Agribusiness (CASA), were rated poorly against all climate objectives by a recent CAPR.

4.29 In Malawi we saw a sophisticated approach to building resilience in the Promoting Sustainable Partnerships for Empowered Resilience (PROSPER) component of the BRACC programme (see **Box 7**). Smallholders in the early stages of commercialisation ('stepping up') are often just one bad harvest away from reverting to a livelihood strategy based on subsistence agriculture ('hanging in'). Recognising this, PROSPER supported sustained graduation from poverty by complementing commercialisation activities with resilience-building interventions in communities. Its approach to resilience building was sophisticated, including complementary interventions to anticipate, absorb and adapt to climate shocks. In Phalombe, for example, the provision of drought-tolerant crop varieties was layered with improved access to climate information, shock-responsive social protection and watershed rehabilitation. PROSPER provides a strong model for complementary interventions to strengthen a community's climate resilience and support self-financed exits from poverty.

61 The Paris Agreement binds countries to reducing greenhouse gas emissions and working together to adapt to the impacts of climate change.

4.30 In contrast to community-based programmes such as PROSPER and Sustainable Inclusive Livelihoods through Tea Production in Rwanda (SILTPR), most commercial agriculture programmes focused on commodities and value chains. A common approach to integrating climate action was the selection and promotion of 'climate-smart' commodities and technologies as climate adaptations. In Rwanda, for example, some IMSAR projects encouraged smallholders to cultivate pigs and mushrooms and to reduce their reliance on drought-vulnerable rain-fed agriculture. IMSAR also trained commercial agents to provide advice on climate adaptation and suggest technologies to farmers. One farmer told us that an agent had encouraged him to purchase drought insurance, for example (a model pioneered by FCDO-funded Access to Finance Rwanda). Interventions supporting farmers to adapt to climate change are valid. However, their effectiveness is likely to be modest compared to approaches with complementary interventions supporting the anticipation and absorption of climate shocks.

4.31 Commercial agriculture programmes may be more suited to strengthening climate resilience in value chains and markets rather than in communities. However, we saw no programmes or investments which did so. More ambitious climate action in IMSAR might have identified and addressed opportunities for adaptation to, and anticipation and absorption of, post-harvest climate risks in logistics, supply chains and value addition.

The effectiveness of sustainability and climate action within agriculture investments and delivery programmes was variable and often not monitored

4.32 BII's attention to sustainability and climate objectives varied by investment. Of the pool of BII investments from which we drew our sample, 78% pre-dated the increased focus on climate brought in under the 2020 climate strategy, and other sustainability and ESG considerations captured in its 2020 impact framework. However, we did see some examples of pre-2020 investments including sustainability objectives and supported by technical assistance (BII Plus).[62] In Malawi, for example, BII Plus supported a sugar cane producer to develop a biodiversity action plan to mitigate wastewater discharge impacts on an adjacent protected wetland. However, monitoring evidence was not available on the effectiveness of these mitigation measures.

4.33 Some FCDO programmes showed innovative approaches to climate action with good results. For instance, in Rwanda, we saw how the SILTPR programme interventions addressed the risks of erosion and landslides exacerbated by increasingly intense rainfall events. These included ensuring minimum set-back distances from rivers, rainwater capture trenches and forest protection. As well as contributing to climate adaptation, these practices also comply with the standards of schemes such as Rainforest Alliance accreditation which guarantee a premium payment for smallholders' produce.

4.34 Our citizen engagement found multiple examples of sustainable agricultural practices being taken up by farmers in FCDO programmes:

> "Three-quarters of the community adopted sustainable agricultural practices such as planting certified early maturing seed which takes three months to mature while recycled seed takes time. Most people also adopted planting trees such as Gliricidia in their fields."
>
> Woman, farmer, semi-structured interview, Malawi

> "Ridge realignment has really pushed us forward in terms of yield. Before realignment, we did not harvest much, but now even a quarter of an acre gives considerable yield to feed the household longer."
>
> Woman, farmer, focus group discussion, Malawi

62 BII Plus is BII's technical assistance and support facility, which aims to deepen the portfolio's development impact through technical expertise.

4.35 We also saw examples of less effective climate action. In Rwanda, DFID's Programme of Support to Agriculture (POSA) funded the Ministry of Agriculture through a trust fund managed by the World Bank. One of POSA's interventions expanded irrigation areas in marshlands. DFID's business case identified the risk that this could increase vulnerability to floods and reduce biodiversity, and planned to mitigate these issues through technical assistance to the Ministry of Agriculture. However, the project completion report concluded that capacity building had not been effective in helping the ministry plan these schemes appropriately.

4.36 We also saw in Malawi how working at arm's length reduced FCDO's ability to challenge projects on sustainability. The ICAI team visited a site in which the Small-Scale Irrigation and Value Addition Project (SIVAP), funded by the Global Agriculture and Food Security Programme (GAFSP) and managed by the African Development Bank, delivered a poorly designed and built irrigation scheme. The project had not adequately addressed the risks of storm damage or considered the capacity of local government for future maintenance. The scheme was no longer operational due to cyclone damage and a lack of funding for repairs. We also saw that farm yields were below expectations of irrigated agriculture even before the cyclone damage.

4.37 Approaches to climate and environmental monitoring were of variable quality. GAFSP, for example, reported a wide range of indicators for climate-smart agriculture, including carbon emissions generated. The majority of GAFSP projects also collected gender-disaggregated data. CASA's monitoring system, by contrast, did not include climate indicators, making it very difficult to assess its contribution to climate action. A more general and persistent challenge was the low level of information conveyed by indicators. POSA's results framework, for example, used irrigation expansion in wetlands to indicate increased resilience to climate variability, despite the potential for an increased vulnerability to flooding. Consequently, it is not clear whether resilience increased overall, or if resilience to drought was strengthened at the expense of resilience to flooding.

The agriculture portfolio's inclusion of nutrition has improved modestly, but the focus on commercialisation makes positive nutritional outcomes more challenging to demonstrate

4.38 Recent CAPRs show that the agriculture portfolio's inclusion of nutrition has increased modestly. FCDO's nutrition team has recently published a guidance note on how to integrate nutrition alongside economic and climate objectives in commercial agriculture programming, and has shared this guidance across FCDO's Food and Agriculture network.[63] However, CAPR recommendations to improve monitoring of nutritional outcomes have not yet been implemented. FCDO recently adopted a policy marker to track ODA expenditure on nutrition. Although its use was delayed by IT migration due to the departmental merger, it has been live since late 2022 and will be applied to new business cases when funding for these becomes available.

4.39 We found mixed attention to nutrition in our country case studies. The clearest evidence came from programmes that worked directly with smallholders and included specific nutritional interventions. In Malawi, PROSPER interventions promoted dietary diversification and infant feeding which were appreciated by the community. SILTPR raised incomes and provided nutrition training, but an evaluation found that malnutrition persisted. Some other programmes either made no reference to nutrition or assumed smallholder nutrition would improve as incomes rose, but did not test this assumption.

4.40 Feedback on such nutrition interventions from our citizen engagement with smallholders in both countries was mixed but mainly positive. The citizens we spoke to said higher incomes allowed them to source more nutritious foods.

63 *Aligning food system activities with healthier diets for low-income households: a guidance note*, Technical Assistance to Strengthen Capabilities project, DAI for the Foreign, Commonwealth and Development Office, May 2022, link.

> “Previously, we could not afford to buy fruits before, but now that we have money, we buy pineapples, oranges, and mangoes because we know they are good for our health and the health of our children.”
>
> Focus group discussion, Rwanda

Educating people about the benefits of nutrition, and planting mixed crops, were noted as successful interventions. In some cases these positive impacts were sustained after projects had closed.

> “Before PROSPER, no one ever thought of having a garden for vegetables. They asked us the crops we plant and we told them and they explained to us that it is possible to make it more nutritious. In the past, we would just fry groundnuts and eat like that. We did not know that it also contains some important vitamins. We had the ingredients but did not know how to mix them to make them nutritious.”
>
> Woman, farmer, semi-structured interview, Malawi

> “Despite the scheme not being functional, people are still continuing the nutritional aspects, which they were taught by the project, and are still growing different foods in their gardens.”
>
> Man, semi-structured interview, Malawi

4.41 There was generally less inclusion of nutrition in programmes and investments working higher up the value chain. We saw relatively few commercial agriculture programmes or investments targeting or monitoring nutritional outcomes for consumers. Commercial agriculture is a high-risk sector and inherently profit-driven. There are limited opportunities for improving the nutrition of poor people and establishing or growing sustainable businesses in most developing countries. Consequently, many of the commodities and value chains we saw were oriented towards exports (such as macadamia in Malawi and tea in Rwanda), high-value foods for the wealthy (such as oyster mushrooms in Rwanda), or industrial products (such as packaging and shea butter in Nigeria). These programmes and investments offer little nutritional benefit to poor food consumers domestically, but might nevertheless be justified in terms of income generation, job creation and economic growth benefits. For example, while a BII investment in Zambian beef is unlikely to result in any nutritional impact for the poorest, it could be justified on the grounds that it has created additional benefits from employment and supply chain development, and that the same firm produces other foods which are more accessible to the poor. However, BII and AgDevCo investments in sugar in Malawi potentially contribute to negative, rather than neutral, effects on the nutrition of consumers. It is unclear how or whether trade-offs between benefits to producers from income and job opportunities and potential harm to consumers were clarified, evaluated and justified in investment decisions.

4.42 We found examples of BII, AgDevCo and FCDO supporting commodities with potential nutritional benefits to consumers, but nutritional outcomes were not consistently monitored. In particular this included firms in Malawi, Rwanda and Nigeria producing chicks and eggs, a high-growth sector which makes animal protein more affordable for low-income households. GAFSP (see **Box 6**) is another example of a programme including both nutrition-sensitive and nutrition-specific interventions.

Box 6: GAFSP case study

The Global Agriculture and Food Security Programme (GAFSP) is the largest global financing initiative dedicated to climate-resilient agriculture, food and nutrition security, and rural poverty in the poorest

countries. GAFSP was launched in 2010 to implement some of the food security pledges made at the G8 meeting in July 2009 following the global food crisis of 2007-08.

According to its reporting, GAFSP has mobilised over $2 billion in donor funds for almost 200 projects through three mechanisms. The public sector window funds proposals submitted by International Development Association-eligible countries for large, multi-year projects aligned with agricultural strategies and nationally determined contributions. GAFSP's private sector window, managed by the International Finance Corporation, uses concessional finance to unlock private investment in potentially high-impact projects. Since 2016, GAFSP has also funded small-scale grants and technical assistance to producer and farmer organisations and small and medium enterprises.

A 2018 independent evaluation found that GAFSP was relevant, but that different management arrangements for the public and private sector windows undermined overall performance. It recommended that GAFSP should continue, with greater alignment of management bodies and an improved focus on the development objectives of private sector investments.[64]

The agriculture portfolio's attention to gender improved over time, although some gender differences in climate vulnerability remain unaddressed

4.43 Approaches to gender align with UK commitments and attention to gender improved over time. Gender equity and women's economic empowerment were consistently referenced in strategic documents, and ministers also prioritised attention to women and girls. Most FCDO programmes in our sample were informed by gender approaches, targeted women in interventions and provided gender-disaggregated monitoring data. While attention to gender in legacy investments remained weak, BII's new investment framework sets out minimum standards for women's empowerment – including as leaders, workers and consumers – and safeguarding in the workplace.

4.44 FCDO programmes such as CASA, MADE, Propcom Mai-karfi and IMSAR specifically addressed women's economic empowerment and set ambitious targets for women's inclusion. These programmes typically worked with both men and women but ensured that selected value chains offered women strong opportunities. In some cases, these were complemented by targeted interventions to support women's inclusion. In Rwanda, for example, some IMSAR interventions selected maize value chains because women farmers were already engaged in that sector, and then worked with women's cooperatives to reduce barriers specific to women.

4.45 Our citizen engagement in Malawi and Rwanda heard how, by increasing women's income generation and improving their access to finance, gender equity had been strengthened through women-focused interventions also accessible to men:

> "Women benefited more. Women have increased knowledge because they were trained in gender equality, and we understood that we are all equal."
>
> Woman, farmer, focus group discussion, Rwanda

> "Before, we could not have access to loans in financial institutions. But from the time the project started to work with us, we were able to have access to loans to get money to solve different issues at home. Also, we can meet our loan payment obligations using the income we receive from maize trading."
>
> Woman, farmer, focus group discussion, Rwanda

64 *Programme evaluation final report, Global Agriculture and Food Security Program (GAFSP)*, LTS International, 13 June 2018, link.

> “More women have been taking part in the activities of the project, especially the agricultural side and VSL [Village Savings and Loan Association] because the project brought a sense of equal responsibility and benefit compared to their male counterparts who used to monopolise incomes before.”
>
> Man, farmer, semi-structured interview, Malawi

> “Apart from other crop sales, we women also could access VSL, and also make some money from selling vegetables from the backyard garden while men only had crop sales to look at.”
>
> Woman, farmer, focus group discussion, Malawi

4.46 Although the portfolio's inclusion of gender and climate objectives improved, attention to the intersection between them – the gendered dimensions of climate vulnerability – was relatively weak. Some FCDO programme documents acknowledged that men and women experience different climate risks, but we found little evidence of this reflected in intervention design or monitoring.

When engagement with citizens took place before and during interventions, it generally contributed to positive outcomes

4.47 Most FCDO delivery programmes engaged farmers and communities during programme inception, particularly over the selection and design of specific interventions. Several programmes also engaged communities in ongoing consultation and governance mechanisms. We found that when this engagement occurred, it generally supported communities' feelings of agency and ownership.

4.48 In Rwanda, plantations established by SILTPR took a participatory management approach. The service companies managing the plantations are entirely community-led, and farmers reported having a strong and influential voice within their management. Similarly in Malawi, with AgDevCo investment the Phata cooperative approached a commercial management firm for support in establishing their own sugar plantation. Through long-term collaboration the management company is enabling the cooperative to develop a sustainable business built around the members' ideas and aspirations. This has included developing new products to diversify income and using profits to fund academic scholarships, which may return skills to the cooperative or enhance recipients' opportunities for finding off-farm employment ('stepping out' of agriculture).

4.49 GAFSP's steering committee and committees for proposal selection now include civil society organisations and farmer organisation representatives, albeit in non-voting capacities. GAFSP also expects projects to engage communities during design. Our visits to SIVAP sites in Malawi confirmed that communities were consulted before and during implementation. However, it was unclear whether the project had responded adequately to their input.

4.50 Our citizen engagement reflected this range of experiences:

> “They first asked about the challenges we face in maize farming. After they explained to us that their purpose is to reduce the burden of maize farmers in their daily activities, they came up with a solution regarding finding a market. That is how we have started working together.”
>
> Woman, farmer, focus group discussion, Rwanda

> "The project, according to the group, sought the community's feedback on its activities and the community explained that they had challenges accessing inputs, especially seed and fertiliser. In response, the project did not do anything to deal with these concerns."
>
> Man, focus group discussion, Malawi

4.51 We also found cases where key challenges to feasibility had not been identified through consultation with smallholders, small enterprise owners, and other citizens and stakeholders. For example, analyses informing the selection of AgResult's project on maize in Zambia and CASA's poultry and aquaculture investments in Malawi had not identified challenges arising from the incentives of, and power relationships between, different market actors. It is unclear whether these consultations engaged with a broad enough range of stakeholders or if they sufficiently investigated political economy issues.

The coherence and effectiveness of the portfolio have been negatively affected by ODA budget reductions since 2020

4.52 The sharp contraction to the UK's economy in 2020 was followed by the government's decision in November that year to reduce its ODA spending commitment from 0.7% to 0.5% of gross national income in the following year.[65] DFID/FCDO spending on agriculture delivery programmes fell by 80% from £258 million in 2019 to £53 million in 2021. Existing programmes were scaled back and planned activities did not begin. In some cases, programme components already being implemented were cancelled. No new agriculture programmes were launched in 2020 or 2021, and only one business case was approved. This abrupt reduction in programming and scaling back of planned spending had immediate and significant impacts on the coherence and effectiveness of agriculture programming and on global and in-country influence.

4.53 The loss of coherence and effectiveness was noted by UK government staff and partners in Malawi. The early closure of programmes and programme components, and the reduced resources for continuing interventions, affected the impact and sustainability of results in programmes such as BRACC (see **Box 7**). The pause on all new spending during 2020 delayed procurement for the MTIP programme during the final stages of a retendering process. We heard from FCDO staff that this led to reputational damage in Malawi. After ODA for country programming in Malawi was reduced by 75%, one of MTIP's three components was closed, another component was placed on long-term pause and the third is running on a reduced budget. This has made it difficult for the programme to deliver against its original theory of change. Climate activities are among those that have been affected by delays to implementation, despite expectations at the planning stage that MTIP could be eligible for up to 15% ICF funding.[66]

Box 7: The impact of budget reductions on previously well-performing programmes: Building Resilience and Adapting to Climate Change (BRACC) in Malawi

BRACC is an example of a well-designed climate programme, particularly in terms of its multidimensional understanding of resilience. The programme is delivered through a package of complementary interventions aiming to improve people's capacities to anticipate, absorb and adapt to shocks and stresses. Key activities included: watershed rehabilitation, crop diversification, market system development, micro-finance and micro-insurance. The programme adopts a bottom-up approach and is tailored towards three broad groups: those 'hanging in', those 'stepping up' and those 'stepping out' of agriculture, with planned graduation pathways throughout.

BRACC's effectiveness was significantly undermined by ODA reductions, which removed and downsized several programme components. Non-governmental organisation consortium activities under PROSPER

65 *Management of the 0.7% spending target in 2020*, Independent Commission for Aid Impact, p. 9, link.
66 *Malawi Trade and Investment Programme (MTIP) business case*, Foreign, Commonwealth and Development Office, August 2020, p. 60, link.

were closed, the BRACC Hub for knowledge management had its funding terminated, and support to a complementary multi-donor social protection programme ended.

4.54 As part of our citizen engagement, several interviewees reported negative effects from early project closure:

> "The project found us crawling, it started teaching us how to walk, but they left along the way."
>
> Man, focus group discussion, Malawi

> "Project practices were not adopted by non-beneficiaries, because it ended early before many had learnt enough."
>
> Woman, focus group discussion, Malawi

> "This project was very good, but the problem is that it ended before the time they initially told us, but had it been implemented as initially planned, this community could have changed a lot."
>
> Man, focus group discussion, Malawi

4.55 Reduced budgets make it harder to maintain focus on cross-cutting issues such as nutrition and gender. They also undermine long-term learning and behaviour change, particularly where programmes are working with smallholder communities to introduce new practices. As our literature review found, long-term funding and the investment of support over time are both critical for smallholder commercialisation interventions to be successful and, moreover, sustainable.[67] External experts and FCDO staff repeatedly told us that many programmes are too short to embed and then take changes to scale. Reducing budgets and cancelling activities have therefore exacerbated an issue already prevalent across programming.

Part two: The UK's agricultural research for development portfolio

The rapid increase in research spending by the former Department for Business, Energy and Industrial Strategy (BEIS) undermined the relevance, coherence and effectiveness of the UK's portfolio of agricultural research for development

4.56 The UK has long recognised the strategic relevance and effectiveness of agricultural research for development (AR4D). The UK overtook France as the largest bilateral donor of ODA to AR4D between 2016 and 2020. The UK's total spending was £763 million between 2016 and 2021. The former DFID's 2015 CFA referenced the importance of research and innovation in driving agricultural transformation, and the department's 2016 research review identified agriculture as an area where the UK has driven significant breakthroughs.

4.57 This overall picture masks huge volatility within the UK's AR4D portfolio over the review period, both in volume of spend and in who the spenders were. In 2015, the UK spent £50 million on AR4D, all through DFID. By 2018, the UK's annual spend was over £163 million, 46% of which was spent by BEIS (see **Figure 8**, above). Much of this was spent through the Global Challenges Research Fund (GCRF), managed first by Research Councils UK (RCUK) and from 2018 by RCUK's successor, UK Research and Innovation (UKRI).[68] The GCRF, which has previously been reviewed by ICAI, had high ambition, with a budget of £1.5 billion

67 *UK aid to agriculture in a time of climate change: literature review*, Independent Commission for Aid Impact, June 2023, available from the ICAI website, link.
68 UKRI is the umbrella body for the UK's seven research councils, Innovate UK and Research England.

and the goal of supporting cutting-edge research addressing the challenges faced by developing countries.[69] Other vehicles for BEIS agricultural research spending included the Newton Fund, also previously reviewed by ICAI.[70] In addition, BEIS used ODA-eligibility justifications to badge existing research funded under other channels as ODA. For example, the Biotechnology and Biological Sciences Research Council (BBSRC) provides strategic funding to eight UK-based bioscience research centres, including the Roslin Institute and the John Innes Institute. BEIS badged over £100 million of this spend as ODA-relevant between 2016 and 2021. After the department tightened its ODA eligibility rules in 2021, following ICAI reviews which were critical of similar practices,[71] this has been discontinued.

4.58 The net effect was a significant change in approaches to AR4D funded by UK ODA. The long-term focus of DFID/FCDO's research portfolio has been on translational research applying knowledge to action that addresses unmet needs. Such research is justified primarily by its ability to achieve development outcomes. For example, DFID/FCDO's funding to the CGIAR (formerly the Consultative Group on International Agricultural Research) (see **Box 10**) supports downstream action research on developing markets for biofortified crop varieties rather than upstream applied research to breed such varieties. The research councils, by contrast, generally focus funding on discovery research that produces new knowledge as a global public good. Our literature review, benchmarking exercise and interviews with independent experts concluded that the pathways to development impact for such research are more uncertain and less well evidenced than in translational research. Several senior international experts on research for development told us that while much early GCRF research was of excellent academic quality, it was difficult to justify in terms of ODA expenditure.

4.59 Our search of publicly available information found 153 agriculture-relevant GCRF research awards valued at over £198 million. Over 50% of these awards were committed in the Fund's first two years. The 2017 ICAI review of the GCRF found that the Fund's development relevance and effectiveness were undermined by its rapid launch and implementation. Although follow-up reviews[72] found that the GCRF had improved on development relevance and working with developing country partners, concerns remained over value for money, ODA compliance and tied aid. As we discuss below, our evidence suggests that the increase in spending by BEIS after 2016 with limited strategic direction, followed by significant reductions in the UK's total ODA budget in 2020 and 2021, reduced the relevance, effectiveness and coherence of the UK's AR4D. Closure of the GCRF, with the last grants awarded in 2021, has seen the post-2016 boom in AR4D followed by a similar bust after 2021. The new International Science Partnerships Fund, launched in March 2023, does not yet have an ODA allocation from the Treasury.

4.60 This volatility in funding and approaches contrasts unfavourably with benchmarked countries in which relatively consistent allocations to specialist development organisations enable clear alignment of individual objectives with shared goals and values. France's Commission on International Agricultural Research, for example, has supported a largely coherent and consistent approach to AR4D since 1978 despite working through a diverse range of ministries and research agencies.

Operational coherence between departments improved over the review period

4.61 Operational coherence between UKRI and the former DFID improved as the GCRF matured. One example is the introduction of the Strategic Coherence of ODA-funded Research Board to coordinate ODA research investments following the 2017 ICAI review.[73] The GCRF's 2018 recruitment of a Challenge Leader for food and agriculture provided a focal point for coordination on agricultural research. DFID's agricultural research staff supported the Challenge Leader and UKRI to engage with global networks of AR4D expertise, contributing to the GCRF's learning journey on developmental relevance and effectiveness. Similarly, UKRI engaged DFID colleagues in reviewing proposals for the Research Hubs

69 *Global Challenges Research Fund: a rapid review*, Independent Commission for Aid Impact, 2017, link.
70 *The Newton Fund*, Independent Commission for Aid Impact, 2019, link.
71 *ICAI follow-up review of 2018-19 reports*, Independent Commission for Aid Impact, 2020, p. 36, link.
72 See *ICAI follow-up review of 2017-18 reports*, Independent Commission for Aid Impact, July 2019, link and *ICAI follow-up review of 2018-19 reports*, Independent Commission for Aid Impact, July 2020, link.
73 *ICAI follow-up review of 2017-18 reports*, Independent Commission for Aid Impact, July 2019, p. 25, link.

programme and identifying where DFID research programmes offered synergies and overlapping partners. We found, however, little evidence of coherence between UKRI and parts of DFID or FCDO other than the agricultural research team. In Malawi, the British High Commission was unaware of the nine GCRF-funded AR4D awards engaged in the country.

4.62 The UK government recognises the need for greater coordination and coherence of agricultural research. At COP26 in November 2021, it announced the Gilbert Initiative to support global transformations towards pro-poor, climate-resilient food systems by 2030.[74] One of the initiative's tasks will be to coordinate investments in agriculture and food systems research and innovation. The ambition is high. The opportunity to leverage the UK's spending on agricultural research into global impact is great. The Gilbert Initiative has been welcomed and advanced by FCDO and UKRI staff. However, it is not clear whether the initiative has the resources, political leadership, prioritisation and governance mechanisms necessary for achieving its goals.

While UKRI improved performance, GCRF funding modalities impeded developmental relevance and went against the spirit of the UK's commitment to untied aid

4.63 UKRI approaches to funding, guided by Treasury rules and BEIS policy and reflecting the historical alignment of the research councils with the needs and capabilities of UK universities, were not well adapted for supporting Southern research organisations. Officials told us that UKRI had low tolerance for the perceived risks of funding universities in the Global South. Consequently, most calls for proposals required a UK-based lead institution. The 2017 ICAI review of the GCRF[75] noted concerns that the concentration of ODA funds remaining within UK-based research institutions undermined the UK's commitment to untied aid. Of the 153 AR4D awards funded by the GCRF that we identified, only one was led by a non-UK institution. The others were led by UK institutions, with subcontracted research partners in the Global South.

4.64 Following the 2017 ICAI review, UKRI improved the GCRF's operating arrangements. This included recruiting a Challenge Leader to strengthen coherence on the GCRF's agriculture and food systems research, and ensuring that awards paid more attention to gender and equitable partnerships with researchers in the Global South. To improve the Fund's strategic relevance, UKRI consulted with global and regional scientific and development experts, and included a senior African academic in the GCRF's Strategic Advisory Group. To improve the development relevance of individual awards, peer-review panels for AR4D proposals began including experts from the Global South, albeit in a minority. Compared to awards from previous rounds of funding, projects in our sample show demonstrable improvements in including Southern partners in leadership positions, focusing on research questions with developmental relevance, and focusing on development impact, such as influencing policy. However, they also show that some fundamental challenges remained.

4.65 Our literature review and benchmarking exercise (see **Box 8**) found that best practice is to ensure AR4D is driven by those with practical knowledge of development challenges, such as research end users or national scientists, rather than the research interests of academics in the Global North.[76] Senior African researchers explained to us how the structure of GCRF projects, with UK leadership and subcontracted African institutions, was a fundamental barrier to equitable North-South partnerships. While some African researchers reported that they had shaped project research agendas, most observed that research questions and methodologies were driven by the interests of UK partners. This compared unfavourably to their experiences of international research awards funded by donors such as Norway and Canada. Inconsistent efforts to ensure that Southern leadership was driving research agendas have reduced the portfolio's developmental relevance and effectiveness.

4.66 Our sample included three projects funded in 2019 through BBSRC's Agri-systems call for proposals, which was informed by a consultation meeting held with African academics in 2017. The call funded eight

74 *UK leads 45 governments in new pledges to protect nature*, gov.uk, 6 November 2021, link.
75 *Global Challenges Research Fund: a rapid review*, Independent Commission for Aid Impact, 2017, link.
76 See chapter 6, section 6.3 in *UK aid to agriculture in a time of climate change: literature review*, Independent Commission for Aid Impact, June 2023, available from the ICAI website, link.

projects with a total budget of £8 million over 24 months, timed to conclude with the then-expected end of the GCRF in 2021. As with many GCRF calls, the time for preparing proposals was relatively short; just ten weeks. The researchers we spoke to highlighted the challenges of designing research with development relevance so rapidly, and then achieving developmental impact in just 24 months. This limited researchers' engagement with research users to ensure that research was appropriately targeted and that outputs were taken up. UKRI officials told us these practical constraints were dictated by the timing of budget allocations from BEIS and uncertainty over the GCRF's future.

4.67 The three sampled projects investigated the potential contributions of biodiversity and natural resource management to productivity and livelihoods in livestock and agricultural systems.[77] In line with BBSRC's increased focus on equitable research partnerships and requirements, all grants built on previous – in some cases long-standing – relationships. However, leadership from, and financial allocations to, Southern partners in these grants varied. In one grant, UK scientists led all research streams, and 75% of the research and all travel budgets also went to UK institutions. Another project had a very well-designed approach for ensuring developmental impact, but only 10% of its budget was allocated to the African university partner, due to their challenges in complying with UKRI's grant management requirements. As UKRI did not provide post-award support or capacity building for Southern research partners, the UK-based lead university contributed administrative training to improve the African partner's capacity to manage future grants.

Box 8: Benchmarking UK AR4D against other donors

UKRI funds both ODA and non-ODA research. This compares with the AR4D programmes of specialised ODA agencies such as Canada's International Development Research Centre (IDRC) and France's Agricultural Research Centre for International Development (CIRAD). These agencies have clearly defined theories of change informing not only thematic priorities but also their modalities of funding and support for impact. Both CIRAD and IDRC emphasise that achieving 'research excellence' in a developmental context requires a higher standard than simply funding excellent science. Both also agree that a key ingredient is ensuring research questions are driven by development challenges rather than academic discovery.

Like the UK, Canada and the Netherlands both fund the CGIAR, although to a smaller extent. France, by comparison, facilitates exchanges between the CGIAR and French research centres, and provides the CGIAR's headquarter facilities in Montpelier while supplying a small amount of finance.

Unlike the UK, Canada, the Netherlands and France do not generally report research council funding to domestic universities as ODA contributions.

Efforts to improve the effectiveness of the GCRF's AR4D were constrained by UKRI's procedures and approaches to post-award management and then impaired by ODA budget reductions

4.68 As discussed above, UKRI took steps to improve the developmental relevance and effectiveness of GCRF awards following the 2017 ICAI review, including the development of a Fund-level theory of change. But to realise the GCRF's full potential for development impact through AR4D would also have required substantial changes to UKRI's business model, which did not take place.

4.69 Because pathways from discovery research to impact are generally long and unreliable, capacity building is a key justification for using ODA in AR4D. But UKRI grant awards cannot support PhD studentships or purchase expensive items of equipment, despite both being significant capacity-building interventions. Similarly, enabling publication by Southern researchers, especially as lead authors, contributes to their credibility and leadership. UKRI requires all publications arising from awards to be open access – free to

77 'Plant based solutions to integrate livestock disease control, nutrition and environmental sustainability in Africa', 'Landscape-scale genomic-environment diversity data to model existing and novel agri-systems under climate change to enhance food security in Ethiopia', and 'Restoring African degraded landscapes with plant biodiversity and livestock management'.

read – which is commendable. However, because their grants cannot pay for (expensive) open access publication, UKRI did not address this key barrier facing the advancement of Southern researchers. UK and non-UK interviewees from all six projects in our sample said such rules are suitable for UK universities but obstruct developmental effectiveness.

4.70 The approach of the former BEIS and UKRI to MEL has largely focused on the overall GCRF portfolio and signature investments, such as the Research Hubs. Efforts to improve the GCRF's performance have been informed by independent process evaluations, and impact evaluations of the overall portfolio are planned for the future. We saw no evidence of UKRI evaluating the specific performance of its AR4D sub-portfolio. BBSRC told us that options for evaluating GCRF calls, such as the Agri-systems call, were greatly curtailed due to ODA budget reductions. We also saw no evidence of UKRI generating cross-project lessons from countries with multiple AR4D projects, such as Kenya, Nigeria or Malawi.

4.71 Approaches to MEL and post-award management have undermined UKRI's ability to understand how its procedures limited the GCRF's developmental impact. Researchers we spoke to expressed concerns that UKRI staff had very limited appreciation of how funded projects operated, the challenges they faced, or reasons underlying performance. A hands-off approach to post-award management meant that UKRI staff neither visited field sites nor met research teams and development partners. Monitoring systems, such as ResearchFish, which captures data on outputs from individual projects, did not enable understanding of why reported impacts happened or if they were meaningful.

Box 9: GCRF Research Hubs

The GCRF's Research Hubs programme supported 12 UK-led research consortia with grants of up to £20 million to tackle 'intractable global challenges'. The hubs were welcomed by ICAI's 2017 review[78] as an opportunity to deepen impact and research uptake. ICAI's follow-up review in 2020 confirmed that internal and external reviews of the hubs had found early evidence of positive impacts.[79] Consultation over and framing of the call, processes and criteria for selecting hubs, and high ambition, all demonstrate how UKRI's learning journey had improved the GCRF's relevance and potential effectiveness.

We sampled three agriculture-relevant Research Hubs. The Water Security Hub included research on irrigation and agriculture, particularly in Colombia and Ethiopia. Research by the South Asian Nitrogen Hub focused on improving yields and reducing environmental impacts from agricultural fertilisers. The One Health Poultry Hub investigated interconnected human and animal health risks in chicken production systems in four Asian countries.

These hubs made credible progress in working with research end users and achieving policy impact. For example, the One Health Poultry Hub provided evidence to, and coordinated revisions of, Bangladesh's National Avian and Pandemic Influenza Preparedness and Response Plan. Similarly, the South Asian Nitrogen Hub and the government of Sri Lanka developed a resolution on sustainable nitrogen management, co-sponsored by Pakistan and the Maldives, and adopted by the UN Environment Assembly in 2022. However, the hubs' impact has been hindered by the cumulative effects of COVID-19 and ODA budget reductions. The decision not to fund a second phase of the GCRF has significantly limited the hubs' ability to reach their full potential, a risk noted in ICAI's 2017 review and further reiterated in its 2021 follow-up.[80]

FCDO's research portfolio was highly focused on development impact

4.72 FCDO focuses on downstream translational research and innovation in its AR4D portfolio. The department's research investments, informed by ministerial priorities, are driven by the expertise of

78 *Global Challenges Research Fund: a rapid review*, Independent Commission for Aid Impact, 2017, link.
79 *ICAI follow-up review of 2018-19 reports*, Independent Commission for Aid Impact, 2020, p. 36, link.
80 *ICAI follow-up review of 2019-20 reports*, Independent Commission for Aid Impact, 2021, p. 13, link.

FCDO advisers drawing on knowledge gap assessments and consultation with international bodies such as the UN Rome-based agencies,[81] regional agricultural organisations, other donors and academia.

4.73 Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises (SPARC) was one of FCDO's few directly managed AR4D programmes. SPARC research informs efforts of FCDO and other donors to support farmers and pastoralists in fragile and conflict-affected contexts. Designed in consultation with FCDO in-country teams, SPARC includes a demand-responsive component to investigate emerging issues, such as the impacts of COVID-19 on agricultural incomes.

4.74 Most DFID/FCDO AR4D programmes funded research managed by co-funding partners, such as the Bill and Melinda Gates Foundation, or supported the work of specialised research institutes. The £45 million Support to the International Agriculture Research Centres (SIARC) programme, for example, funded the Centre for Agriculture and Bioscience International (CABI).[82] Through initiatives such as Plantwise, CABI strengthens capabilities in agricultural research and extension services of member countries. A researcher from the Rwanda Agriculture and Animal Resources Development Board told us how Plantwise had helped her team identify climate-driven invasive pests and advise farmers on crop protection measures.

4.75 A former FCDO chief economist identified investments in the CGIAR (formerly the Consultative Group on International Agricultural Research) as among the most effective vehicles for the department to deliver on ODA objectives. The UK was the CGIAR's third-largest funder (12% of its total budget) between 2016 and 2021 (see **Box 10**). DFID/FCDO's largest single AR4D programme was the £159 million CGIAR 2017-22. The CGIAR's range of research activities is wide and FCDO allocates funding to initiatives aligning with departmental priorities. In recent years these included climate change, gender and nutrition. The scale of some results is impressive. For example, 50 million rural people in 41 countries have benefited from the CGIAR's biofortified crop varieties since 2010.

Box 10: The UK's support to the CGIAR

The CGIAR is an international agriculture research organisation made up of specialised research centres and with offices in 89 countries. The CGIAR's mission is to deliver science and innovation to advance the transformation of food, land and water systems in a climate crisis. It has worked to create and scale up new crops and technologies that have positive health, social, environmental and economic returns.

The UK has a significant history of engagement with the CGIAR, including long-term support to the CGIAR's mission to develop and scale up the use of biofortified crops by smallholders. One of its best-known success stories has been the development of the biofortified orange-fleshed sweet potato (OFSP), rich in vitamin A, by CGIAR researchers at the International Potato Centre in the mid-1990s. The UK has been a major funder of the development, introduction and scale-up of the OFSP in African food systems for 20 years. The OFSP is an example of leadership, commitment and a strong evidence base, supported by steady donor investment, leading to successful innovation. To date, more than 6.8 million households in 20 countries throughout Africa and South Asia now grow and eat the OFSP.

The UK has also worked with the US, Germany, the Bill and Melinda Gates Foundation and other members of CGIAR governing bodies on the 'One CGIAR' reform process to increase coherence among the CGIAR's research centres. The reforms aim to sharpen the CGIAR's focus on cross-cutting research challenges facing global agriculture and food security, such as climate change. They also aim to streamline the organisation's governance processes and make it responsive to gender issues in agriculture.

81 The Rome-based agencies are the Food and Agriculture Organisation of the United Nations, the World Food Programme, and the International Fund for Agricultural Development.

82 SIARC also funded the World Vegetable Centre and the International Centre of Insect Physiology and Ecology.

Gender was a priority for DFID/FCDO's research programmes, while GCRF efforts to improve the focus on gender came too late to influence most awards

4.76 Of the six UKRI-funded research awards in our sample, only two – the Restoring African Degraded Landscapes project and the Water Security Hub – clearly included significant gender questions, expertise at leadership level and gender-informed approaches to research uptake. After criticism, including from ICAI,[83] UKRI's approach to integrating gender in awards improved over the GCRF's lifespan. From 1 April 2019, UKRI required GCRF proposals to include a gender equality statement. However, by this time, 75% of the awards in the agriculture-related portfolio had been made, including the awards in our sample.

4.77 We heard from researchers that while UKRI began to request more attention to gender, it provided limited support on integrating gender into ongoing research projects. Given the highly gendered nature of agricultural activities, the limited attention to gender poses a significant obstacle to achieving developmental impact.

4.78 By comparison, most DFID/FCDO programmes displayed a strong commitment to improving gender sensitivity in research, research uptake and research management. DFID/FCDO's support for CGIAR has consistently emphasised attention to gender in research, and gender outcomes are explicitly monitored. Most projects funded by AgResults used gender-aware testing of innovations and provided gender-disaggregated monitoring data. Three projects funded by the CGIAR after a 2018 decision to strengthen gender and social inclusion explicitly integrated gender in design, with competitors required to develop gender engagement plans and increase gender-inclusive activities. The CGIAR launched its Gender Impact Platform in 2020 to strengthen the organisation's gender impact and synthesise capabilities and research from across the organisation.

The UK has funded much high-quality climate-related research, although there were missed opportunities to strengthen the GCRF's focus on climate

4.79 Our stakeholder interviews and benchmarking exercise found that the UK's thought leadership on agriculture and climate research for development is widely recognised. This is borne out by the attention to climate and environmental considerations in DFID/FCDO's research portfolio. Climate change was a significant focus of agricultural research programmes such as SIARC and CGIAR 2017-22. While climate change was not an early priority of the former DFID's AgResults programme, this improved during implementation and some significant interventions focused on climate mitigation and strengthening resilience.

4.80 The portfolio of GCRF AR4D awards included some innovative and sophisticated research targeting climate-relevant questions. For example, BBSRC's Agri-systems call funded an interdisciplinary project investigating how managing agroecological diversity at multiple scales could support climate-resilient livelihoods and food security. The £15 million South Asian Nitrogen Hub, supported by the Natural Environment Research Council (NERC), investigated options for mitigating climate emissions arising from over-application of nitrogenous fertilisers and on-farm climate adaptation through the use of nitrogen-fixing plants.

4.81 However, climate and environmental considerations were not a significant theme in all project awards. In the absence of figures from UKRI, we used publicly available information to identify climate impacts, adaptation, resilience or mitigation as major research themes in approximately one-quarter of the GCRF's 153 AR4D awards. This varied between research councils. We identified a significant climate change focus in over 60% of NERC's 21 AR4D grants and in 15% of BBSRC's 78 AR4D grants. Inevitably, some research areas received more funding than others.

4.82 We noted, however, that some areas received relatively little funding despite being subjects of high development relevance where UK research has notable strengths. For example, just five awards, each

83 This was a concern raised by ICAI across ODA-funded research programmes implemented by the former BEIS. See *The Newton Fund: a performance review*, June 2019, p. 21, link.

under £0.5 million, investigated climate forecasting for agriculture. Just two awards investigated the mitigation or sequestration of climate emissions in agriculture, one of which was the South Asian Nitrogen Hub. Consequently, we question how effectively UKRI was mapping the UK's strategic comparative advantage against international priorities for unmet development needs or ensuring coherence between research councils in developing the GCRF's AR4D portfolio.

Agricultural research for development was negatively affected by ODA reductions, with UKRI's programmes more severely affected than FCDO programmes

4.83 ODA budget reductions in 2020 and 2021 negatively affected the AR4D portfolios of FCDO and, especially, UKRI. Some FCDO research programmes such as SPARC and SIARC had their total budgets reduced or components cancelled, impacting the scope of activities. FCDO's largest programmes were with long-term, large institutional partners such as CGIAR and the Bill and Melinda Gates Foundation. While some planned activities were cut back, these large partners were more able to absorb short-term budget fluctuations, defer FCDO's payments into future years and maintain ongoing activities, somewhat mitigating impacts on effectiveness. While FCDO payments to these large programmes fell during 2020 and 2021, the overall impact may be limited if funding recovers in future years. However, there have been reputational impacts on FCDO's credibility as a dependable long-term research partner.

4.84 The GCRF's budget fell by 70% in 2021, forcing UKRI to implement budget reductions across research grants and portfolio management. Planned evaluation and learning activities were cut back, limiting the impact of Challenge Leaders on coherence. Budget reductions also significantly affected the effectiveness of ongoing projects. The impact on our three sampled Research Hubs was notable. These had spent their first two years operationalising consortia, hiring researchers, initiating research activities, and then navigating the constraints on field research imposed by the COVID-19 pandemic. The cuts happened when research activities should have accelerated. Since the value for money criteria used by the government to guide decisions on cuts focused on results achieved rather than potential for impact, the hubs, which were just starting their data gathering phase, were undervalued and were therefore hit particularly hard.

4.85 Reducing their annual budget by 70% inevitably affected hub activities, staffing and momentum. The burden fell disproportionately on partners in the Global South despite efforts by some UK university lead partners to absorb costs. Hub researchers told us the cuts damaged trust and relationships between consortia partners, with development partners and with UKRI. The hubs have achieved some significant results, particularly in achieving policy impact, despite the disruption. It is clear, however, that the hubs' overall potential for achieving intended outcomes has been compromised by the budget reductions and the closure of the GCRF, which has effectively forestalled opportunities for funding further phases of research. The ambition of funding large consortia to address 'intractable global challenges' is laudable, but realistically requires strategic and financial consistency over more than five years to achieve impact and capitalise on the transaction costs of establishing large consortia.

Part three: Overall coherence of the UK's portfolio of agricultural investment, delivery and research programmes

Despite outstanding potential, the UK's overall portfolio of agricultural programmes, investments and research now punches below its weight due to fragmentation

4.86 The UK can contribute substantial capability to addressing complex global challenges facing agriculture and food systems. It has world-class expertise in agriculture, nutrition and climate change. The UK has also demonstrated an ability to invest in pragmatic, novel interventions contributing to transformative change. A prize competition launched by the AgResults programme in Vietnam, for example, identified innovations that increase rice yields while reducing climate emissions. Initial results have attracted scale-up funding from other donors and the programme's experts have advised FCDO Nigeria on developing local interventions using the same approach.

4.87 However, the UK government's work on agriculture has not managed to channel these assets into a

coherent, focused portfolio of work. The UK spent £2.63 billion in bilateral aid to agriculture between 2016 and 2021,[84] across delivery programmes, investment and research. Many individual initiatives were highly effective and we saw good examples of joined-up programming between 2016 and 2019. At the time of writing, however, the overall picture of results and achievement appears disjointed.

4.88 Positive outcomes have resulted from instances of collaboration on shared objectives between teams in FCDO and across government. FCDO's agricultural research team has worked with UKRI, including joint funding of research programmes,[85] and supported BBSRC's consultation in Africa to improve the relevance to development objectives of the Agrisystems call for proposals. Effective collaboration between FCDO's agricultural research and nutrition teams has enabled stronger integration of nutrition into the agriculture research agenda.

4.89 But examples of missed synergies or opportunities for cross-organisational learning are numerous. The FCDO team responsible for AgDevCo was unfamiliar with lessons from the approach of GAFSP's private sector window to funding agribusinesses in Africa. Regular meetings between AgDevCo and British high commissions and embassies do not appear to have resulted in improved, joined-up programming in practice (see **paragraph 4.24**). The University of Rwanda's African Centre of Excellence for Sustainable Cooling and Cold Chain, recipient of a 2020 Defra grant, and TradeMark East Africa Rwanda, funded by FCDO, were unaware of each other's work, despite potential synergies around the inclusion of localised cold chain technologies in agricultural value chains. Across our three country case studies, we found no evidence that FCDO staff knew of active GCRF AR4D awards. Opportunities were lost in both directions: GCRF awards in Nigeria investigated issues relevant to FCDO programmes, such as cassava production and the use of climate data, while Malawian researchers told us that support from the High Commission could have granted credibility to their policy recommendations.

4.90 The large number of departments, teams and business units across the UK government working on agriculture and food systems contributes to the fragmentation of effort. Another challenge is the scale, diversity and complexity of challenges related to food and agricultural systems. Officials and experts agree on the need to support global transitions to food systems that provide nutritious, safe and affordable food to nine billion people, generate inclusive jobs and growth, adapt to growing climate risks and reduce climate emissions and environmental impacts. This necessarily implies the need for coherent action across multiple policy domains. In FCDO alone, seven different offices and business units engage in agriculture from different policy perspectives.[86] Yet many of those we spoke to said that current strategic direction, clarity on roles and responsibilities, and ownership and institutional incentives were insufficient to achieve coherence on such a complex and challenging agenda.

4.91 These challenges to coherence increased. The 2015 CFA initially provided a useful starting point for aligning pro-poor work on agriculture around three complementary strategies: 'hanging in', 'stepping up' and 'stepping out'. This clearly informed the UK focus on commercial agriculture, carried through into the 2017 *Economic development strategy* and programmes such as IMSAR and CASA. This has not been so clearly the case in subsequent strategic documents, which have either not prioritised agriculture,[87] or have shifted away from the portfolio's specific concentration on commercial agriculture and towards a broader focus on sustainable agriculture and development.[88] Programmes with initially coherent designs have struggled to maintain that coherence as they respond to changing priorities as a result of budget reductions and frequently changing policy agendas such as a higher prioritisation of climate change, nutrition and biodiversity. We saw this with the Malawi Trade and Investment Programme, Promoting Learning in Agribusiness using New Technologies, and Powering Economic

84 Including £1.52 billion in multilateral ODA, this represents a total portfolio of £4.01 billion in aid to agriculture.

85 See Sustainable Crop Production Research for International Development, Development Tracker, link; Zoonoses and Emerging Livestock Systems: reducing the risk to livestock and people, Development Tracker, link; Agri-Tech Catalyst, Development Tracker, link.

86 FLAG team (Economic Cooperation and Development), Sustainable Water and Food Systems team (Energy, Climate and Environment Directorate), Food and Agriculture Research team, Nutrition Policy team (Human Development), Africa Economic Development Group (Africa Directorate), Ambassador to the Rome-based agencies, and the Head of Profession for the Food and Agriculture Cadre.

87 The 2022 *International development strategy* only touches on agriculture, referring to it in connection with UK trade and UK expertise priorities. See *The UK government's strategy for international development*, Foreign, Commonwealth and Development Office, May 2022, pp. 9 and 10, link.

88 See, for example, *Integrated review refresh: responding to a more contested and volatile world*, HM Government, 2023, pp. 27 and 47, link.

Growth in Northern Nigeria. The increasing use of ODA spent 'in the national interest' through, for example, aid for trade[89] and mutual prosperity approaches[90] runs the risk that UK aid to agriculture's poverty focus is diluted, and has made it increasingly difficult to create a coherent portfolio.

4.92 Agriculture and related thematic areas such as climate and nutrition are highly technical subjects requiring expertise to implement programming, manage trade-offs and appropriately interpret strategy to guide decision making. Some FCDO officials told us, however, that the value placed on technical expertise and evidence by senior managers had declined. This could be seen in the reduced role played by technical experts in decision-making. In interviews, we found that senior officials in the UK government and arm's-length bodies could reference strategic documents setting current goals for agriculture and climate change, but found it difficult to specify how exactly their work aligned with those priorities. Without greater clarity of vision, and necessary expertise to guide decision-making, it is virtually impossible to design and implement a cohesive portfolio of activities.

4.93 Coherence has also been undermined by successive disruptions to processes of government, including staff time being diverted towards preparations for Brexit, the merger of DFID and the Foreign and Commonwealth Office, COVID-19 and ODA reductions. Sustaining the long-term engagement necessary for delivering change has become increasingly difficult due to a move towards setting one-year budgets. We heard that growing needs for coordination are also frustrated by declining agricultural expert staff numbers (see **paragraph 4.97**).

4.94 Significant fluctuations in funding, both overall and between departments, has destabilised coherence. The former DFID's agriculture budget fell significantly after 2019, while average annual investment into the food and agriculture sector from BII increased between 2016 and 2021. Agricultural research saw a surge and then a decline in spending by the former BEIS (see **paragraph 4.57**). Such swings in overall financing can also undermine effectiveness. Our literature review found that agriculture is particularly sensitive to turbulence in financing and shifts in approaches, and relies on patient and consistent finance to be transformational.

The UK still has significant influence with partner governments and other donors, and in multilateral bodies, but the ability to maintain this influence is rapidly degrading

4.95 The UK has retained significant influence in multilateral forums and among development partners. Multilateral and bilateral donor partners told us that the UK is particularly appreciated for its technical competence, strategic thinking and willingness to challenge and support multilateral platforms to improve their performance. Between 2017 and 2021, for example, the UK was co-chair of the GAFSP steering committee and chaired GAFSP's private sector window. This position enabled the UK to increase the focus on climate action, disability, funding for fragile and conflict-affected countries, and coordination between GAFSP's private and public sector windows. Prioritising attention to GAFSP is itself a strategic vehicle for influencing a wide range of international partners (see **Box 6**). Similarly, the UK has influenced the CGIAR's reform process, attention to climate action and gender, and alignment with other international agriculture institutions. Its focus on multilateral reform has enabled the UK to push for greater attention to, and delivery on, development objectives in multilateral initiatives. This is an important strategic interest area for the UK,[91] with strengthening influence and multilateral engagement a core priority set out in its 2023 *Integrated review refresh*.[92]

4.96 We saw how capable in-country staff in Malawi and Rwanda worked with and influenced country governments and the donor ecosystem. But we also heard how these relationships had eroded as key staff were lost and not replaced. Rwandan officials and development partners told us how one UK official's tenure as chair of the donor working group had a substantial impact on the country's agricultural development agenda, improved cohesion among donors and gained the UK significant influence with Rwanda's Ministry of Agriculture. However, when this individual left and the post was not

89 For a full account of the UK's aid for trade policy agenda see *UK aid for trade*, Independent Commission for Aid Impact, June 2023, link.
90 See *The use of UK aid to enhance mutual prosperity*, Independent Commission for Aid Impact, 2019, link.
91 *Global Britain in a competitive age: the integrated review of security, defence, development and foreign policy*, Cabinet Office, 2021, p. 16, link.
92 *Integrated review refresh: responding to a more contested and volatile world*, HM Government, 2023, p. 19, link.

filled, the UK's prominence and influence in the sector was largely lost. In Malawi, the High Commission continued to provide expertise and evidence to government and other donors. We heard it was credited with making some influential interventions on issues such as land reforms and agricultural input subsidies. We also, however, saw how many observers in Malawi thought the UK was no longer engaged in the agricultural sector. In part, this reflected FCDO's switch to a focus on the private sector, without communicating clearly how this relates to agriculture in Malawi. But the overall picture shows that as FCDO spending on agriculture has declined, so has its country-level influence and leverage in the sector.

4.97 The UK's hard-won influence in international agriculture has been enhanced by a cohort of highly capable technical staff with strong networks and long-term senior experience in the sector. The number of advisers with accredited expertise in livelihoods and agriculture working in a relevant role fell by over 25% between 2019 and 2023. FCDO advisers told us that this loss of technical staff sometimes resulted in less coherent and evidence-based decisions, and that they believed technical expertise was accorded less significance in the merged department.

4.98 The UK has not articulated a strategy on agriculture and climate change, despite climate change being a UK priority. The UK used its 2021 COP26 presidency and period as co-chair of the G7 to launch several high-profile initiatives and campaigns. These included the Global Action Agenda on Innovation in Agriculture (#ClimateShot) to boost innovation in agriculture, mitigate climate emissions and transform food systems, and adding agriculture as a component of the Breakthrough Agenda.[93] We heard mixed views on whether some of these announcements had been followed by substantial progress. Evidence submitted to this review reported some progress on building the #ClimateShot Investor Coalition (CLIC). We understand that meetings of two CLIC action groups have been convened, and hiring is underway to recruit a manager to run the CLIC Agrifood Investment Connector. However, we were shown no evidence of specific outputs so far, beyond a preliminary findings report published at the end of 2022.[94]

4.99 Multilateral partners told us that they observed how FCDO had less bandwidth to engage on issues of international significance due to preoccupations with internal restructuring and ODA reductions. Many partners reported that the UK's ability to bring innovative thought leadership and evidence had degraded. Both UK officials and multilateral partners candidly expressed that reduced funding has diminished the UK's influence. Independent experts, development partners and representatives of national governments that we spoke to indicated that staff losses and reduced programming were lowering the UK's international standing. There is a widespread understanding that the UK is currently drawing on reputational capital built up over many years and that this capital is running out. A senior official of a donor country pointed out that credibility is not lost as soon as funding is reduced, but erodes over years.

Investment in monitoring, evaluation and learning was a significant component of the UK's thought leadership and influence, but has been significantly impacted by ODA reductions

4.100 International partners told us they recognise and value the UK's comparative advantages in providing evidence and expertise in MEL. The UK provided MEL advice to multilateral initiatives, strategically using evaluations to improve programming and influence direction setting. While serving as steering committee co-chair of GAFSP, for example, the UK promoted the use of independent evaluation findings to improve governance arrangements and improve the private sector window's developmental impact (see **Box 6**).

4.101 DFID/FCDO has made significant long-term investments in systems for organisational learning and evidence sharing, such as its 'Best Buy' series. Policy research, knowledge management and MEL programmes and components have been used to great advantage, providing evidence to guide programmes, set strategic directions and influence others. For example, the Agricultural Policy Research in Africa programme provided strategic evidence on agricultural commercialisation to a range of stakeholders. The AgResults programme's long-term MEL module conducted impact evaluations which

93 See *Transforming agricultural innovation for people, nature and climate*, link, and The Breakthrough Agenda (page archived on 11 March 2023), link.
94 *Landscape of climate finance for agriculture, forestry, other land uses, and fisheries*, Climate Policy Initiative, November 2022, link.

improved specific projects and built up a body of evidence on applying an innovative payment for results model. Annual commercial agriculture portfolio reviews (CAPRs) produced by CASA's knowledge management component have provided high-level performance assessments of FCDO's commercial agriculture portfolio, judging alignment with strategic objectives and identifying areas for improvement. CAPRs are frequently referenced among UK government officials and are the only portfolio-wide performance assessments of FCDO's considerable investment in commercial agriculture.

4.102 Such knowledge and learning investments have been cut back in recent years, despite clear benefits to the UK's influence and strategic effectiveness. The UK has recognised that it has a particular strength in expertise, and that development expertise forms a core part of how it will deliver its international development offer.[95] Compared to reducing staff numbers and finance directly targeting poverty reduction, reducing MEL investments can seem like a relatively easy choice. The practice of agricultural development is necessarily varied, as effectiveness depends on the ability to adapt general principles to local circumstances. MEL is important for capturing lessons on success factors across different contexts. Downgrading capability for lesson learning across the portfolio will make rebuilding a strategic and coherent portfolio in the future more difficult.

4.103 We heard concerns from development partners that reducing the focus on MEL was lowering regard for UK expertise and potentially undermining the UK's strategic value as an international partner. Many partners also noted concerns that reduced investment in MEL and expertise might eventually damage the perception that the UK could be relied upon as a thought leader.

95 *Integrated review refresh: responding to a more contested and volatile world*, HM Government, 2023, pp. 27 and 57, link.

5. Conclusions and recommendations

Conclusions

Relevance

5.1 The UK agricultural delivery programmes and investments we reviewed are generally well targeted at inclusive growth and poverty reduction. Attention to climate change has been growing. The scale of the challenge is increasing, but the UK's development spend is falling by comparison. At COP26 the UK called for a global transition to food systems that are climate-resilient, generating inclusive growth and jobs, and providing food and nutrition security while reducing impacts on the climate and nature. If the UK is to make an effective contribution to this highly ambitious goal, it will need clearer and more consistent objectives and greater attention to how they shape work across multiple government departments and policy agendas.

5.2 The commercial agriculture portfolio has tested many models across a range of value chains in varied sectors. Programmes implemented by the former Department for International Development (DFID), and subsequently the Foreign, Commonwealth and Development Office (FCDO), were frequently ambitious and innovative, and made significant efforts to improve inclusion of climate change and nutrition in the commercial agriculture portfolio. The evidence from different intervention types and contexts needs synthesising to guide future programming. Programmes would also benefit from more attention to the gendered dimensions of climate vulnerability in agriculture.

5.3 British International Investment's (BII) focus on stimulating growth in large firms, and its statutory requirement to realise a return on investment, create fewer and more indirect pathways to poverty reduction and smallholder commercialisation compared to DFID/FCDO's delivery programmes. The need to integrate additional priorities, such as climate change, gender and nutrition, can increase the challenge and the complexity of BII's task by widening the development objectives it must satisfy while also realising a return on investment. Consequently, the substantial share of the agriculture portfolio that is made up of BII investments has performed less well in these areas of importance for UK aid. However, BII has shown improvement under its new strategy and development impact framework.

5.4 DFID/FCDO's agricultural research portfolio remained highly relevant with considerable developmental impact. However, increased spending through the Global Challenges Research Fund (GCRF) reduced the overall developmental relevance of the UK's official development assistance (ODA) to agricultural research. While UK Research and Innovation (UKRI) improved the GCRF's developmental relevance, these efforts did not go far enough and took effect after most funds had already been spent. In future initiatives, more should be done to ensure research is driven by development challenges and Southern leadership.

5.5 Overall, we have awarded a **green-amber** rating for relevance, despite sometimes insufficient attention to climate, nature and nutrition in delivery programmes and investments, and constraints arising from UKRI's focus on UK-led agricultural research.

Coherence

5.6 The 2015 *Conceptual framework on agriculture* provided the former DFID with a clear approach for an agricultural development portfolio based around supporting commercial opportunities for smallholder farmers. DFID/FCDO worked hard to integrate the increasing prioritisation of climate and nutrition issues, although this has not always been easy to accomplish in a commercially oriented portfolio. The fact that agriculture crosses a wide range of highly technical policy agendas has not made maintaining coherence easier.

5.7 Reorganisations, leadership churn and successive crises have exacerbated these challenges. We found that the ambition of new priorities was not matched by sufficient attention to results. Instead, there was an absence of clear strategy guiding work across multiple departments and business units, and a

loss of expertise over time. We spoke to many officials who recognised the importance of advancing an ambitious agenda around climate-resilient food systems. We found little confidence among them that the UK government would currently be able to deliver.

5.8 Recent reductions in programme budgets mean that the UK's influence with partner governments has often become contingent on the initiative and capability of in-country staff. The UK has maintained more consistent and significant influence with multilateral and donor organisations. International partners still value the UK for thought leadership and the generation and use of evidence. However, the UK is drawing upon this reputation, and there is a significant risk that its influence will degrade rapidly soon.

5.9 While the UK managed to maintain international influence with multilaterals, fragmentation between policy areas and business units, weak synergies between programmes and investments, the impact of ODA reductions on complementary interventions, and declining influence with partner governments merit an **amber-red** rating for coherence.

Effectiveness

5.10 We found many positive examples of strong results from innovative approaches in a high-risk sector. Our citizen engagement reported positive impacts on people's livelihoods and agency, particularly when people were consulted, and had their say on programmes. We also found evidence of contributions to gender equity through gender-aware interventions. However, short intervention periods and poorly designed exits could undermine the sustainability of some results. We also found mixed evidence that programmes and investments were contributing to climate resilience and environmental sustainability. While some programmes have produced strong results, others are unlikely to be sustained or may have even exacerbated climate vulnerability.

5.11 Opportunities for learning are being lost. Monitoring, evaluation and learning (MEL) frameworks that do not systematically capture results, as well as a limited number of retrospective evaluations, undermine lesson learning on success factors across a diverse portfolio of varied interventions. MEL was cut back in some cases as a result of the ODA budget reductions, and this has also affected lesson learning and the UK's thought leadership.

5.12 UK-funded agricultural research has contributed new knowledge and achieved some development impact. However, UKRI's capacities and rules were poorly adapted for delivering on the GCRF's high ambitions. Despite shortfalls in approaches to monitoring and evaluation, UKRI learned from experience and made incremental adaptations to improve performance. Greater improvements in UKRI's effectiveness were limited by its rules and procedures, historic focus on funding UK universities, and uncertainty about the future of ODA research budgets.

5.13 Our rating of **green-amber** for effectiveness reflects the effective contributions to poverty reduction of UK programmes and investments, despite the declining focus on MEL, the sometimes superficial approaches to climate change and nature, and the limited developmental effectiveness of some agricultural research.

Overall

5.14 Overall, we awarded a **green-amber** rating for the UK's work on agriculture in a time of climate change. This rating reflects the portfolio's substantial achievements, while noting declining coherence and relevance, and the negative impacts of ODA budget reductions on effectiveness. Some substantial improvements will be required if the portfolio is to meet the government's policy objectives. Below we offer some recommendations for where improvements could be made.

Recommendations

Recommendation 1: The government should ensure that all agriculture programmes and investments have an integral focus on climate change and nature.

Problem statements:

- Climate action is not always well integrated into programmes and investments focused on commercial agriculture and economic growth objectives.
- Delivery programmes have limited climate ambition, such as promoting specific climate adaptations rather than strengthening systemic resilience.
- There is limited attention to climate risk and resilience in value chains, such as logistics and post-harvest losses.
- Climate indicators often do not enable a comprehensive understanding of the effectiveness of climate action.
- There is a potential over-attribution of programmes to the UK's International Climate Finance budget.

Recommendation 2: All commercial agriculture programmes and investments should be monitored for nutritional outcomes.

Problem statements:

- Nutritional outcomes of agriculture programmes are often inferred as deriving from income and job creation.
- Where nutritional outcomes are inferred from programme hypotheses, there is insufficient monitoring of these outcomes to evidence this.
- Nutritional outcomes for food consumers are not considered in commercial agriculture programmes.

Recommendation 3: The government should act to secure the UK's influence and thought leadership on agriculture.

Problem statements:

- FCDO advisers say they have experienced a devaluation of technical expertise by senior management.
- The loss of 25% of FCDO's livelihoods advisers and the failure to replace experienced staff is reducing the department's expertise and ability to design and deliver innovative and effective programmes.
- Declining prioritisation of MEL is reducing options for lesson learning from agricultural programming and investments.
- The UK's convening power and influence with donors and partner governments on agriculture has been declining.

Recommendation 4: FCDO, BII and AgDevCo should look for operational synergies and complementarities between programmes and investments to maximise effectiveness, building on their comparative advantages.

Problem statements:

- Although cooperation between FCDO and BII, and between BII and AgDevCo, is increasing, opportunities at the country level are still being missed.
- The sustainability of value chain interventions from FCDO's delivery programmes is uncertain as programme cycles do not match the long-term horizons needed for such efforts.

- AgDevCo's lowered appetite for risk reduces the finance and support available to early-stage investments.
- In isolation, BII's development finance for agriculture does not demonstrate adequate evidence of impact so far.

Recommendation 5: The Department for Science, Innovation and Technology (DSIT) and UKRI should integrate learning about development effectiveness, including from previous ICAI reviews, into future ODA-funded agricultural research.

Problem statements:

- Replacement of the GCRF by the International Science Partnership Fund (blending ODA with non-ODA-funded research) continues the pattern of disruption to strategic relevance, coherence and effectiveness of agricultural research for development (AR4D).
- DSIT and UKRI's focus on funding UK-led discovery research constrains the relevance and effectiveness of their agricultural research portfolio for development objectives.
- Potential development relevance and benefits of AR4D to ODA-eligible countries, such as capacity building, are not realised due to government rules and UKRI procedures.
- ICAI's concerns that UK aid should meet the spirit of the commitment to keep aid 100% untied, or report where in practice aid is only channelled to UK institutions, have not yet been fully addressed in DSIT and UKRI protocols and rules.
- Monitoring and evaluation of individual GCRF awards does not enable assessment of development effectiveness and impact.

Annex 1: Overview of sampled programmes

Programme	Dates	Dept	Themes	Value
Global Agriculture and Food Security Programme (GAFSP)	2012-2026	FCDO	All	£186 million
Support to CGIAR (formerly the Consultative Group on International Agricultural Research)	2017-2022	FCDO	Climate-smart agriculture, nutrition-sensitive agriculture, gender	£159 million
AgDevCo (Africa Agricultural Development Company)	2013-2022	FCDO	Smallholder commercialisation	£144 million
British International Investment (BII) investments in agriculture	2016-2021	BII	Smallholder commercialisation	£98 million
Biotechnology and Biological Sciences Research Council (BBSRC) / Global Challenges Research Fund (GCRF) call on Agri-systems research to enhance livelihoods in developing countries	2019-2021	BEIS/UKRI	N/A	£8 million
GCRF Global Interdisciplinary Research Hubs	2019-2023	BEIS/UKRI	N/A	£45 million[96]
Commercial Agriculture for Smallholders and Agribusiness (CASA)	2017-2024	FCDO	All	£32 million
Support to the International Agriculture Research Centres	2016-2023	FCDO	Climate-smart agriculture, nutrition-sensitive agriculture	£45 million
Programme of Support to Agriculture in Rwanda (POSA)	2014-2020	FCDO	All	£43 million
AgResults	2012-2029	FCDO	Climate-smart agriculture, nutrition-sensitive agriculture	£31 million
Total				**£791 million**

96 The total size of the GCRF Research Hub programme was £200 million. We sampled three agriculture-related hubs with a total value of £45 million.

Annex 2: Overview of relevant programmes from our case study countries

Malawi Programmes	Dates	Dept	Themes	Value
Support to the Global Agriculture and Food Security Programme (GAFSP)	2012-2026	FCDO	All	£52 million
Africa Division funding to AgDevCo (African Agriculture Development Company)	2013-2022	FCDO	Smallholder commercialisation	£13 million
Commercial Agriculture for Smallholders and Agribusiness (CASA)	2017-2024	FCDO	All	£2.9 million
Support to CGIAR (formerly the Consultative Group on International Agricultural Research)	2017-2022	FCDO	Climate-smart agriculture, nutrition-sensitive agriculture, gender	£10.3 million[97]
Malawi Trade and Investment Programme (MTIP)	2020-2026	FCDO	Smallholder commercialisation	£39 million
Malawi Agriculture Programme (MAP)	2011-2018	FCDO	Smallholder commercialisation	£35 million
Building Resilience and Adapting to Climate Change in Malawi (BRACC)	2018-2023	FCDO	All	£90.5 million
Private Sector Development Programme in Malawi (PSD)	2013-2021	FCDO	Smallholder commercialisation	£18 million
Enhancing Community Resilience Programme (ECRP)	2011-2018	FCDO	Climate-smart agriculture	£27 million
British International Investment (BII) investments in agriculture (Kamponji Enterprises Limited, Jacoma Estates Limited, Cattle Feedlot Company)	2016-2021	BII	Smallholder commercialisation	~£26 million
Agriculture and Food-system Resilience: increasing capacity and advising policy (AFRICAP)	2017-2022	BEIS	N/A	£8 million[98]
Building research capacity for sustainable water and food security in the drylands of sub-Saharan Africa (BRECcIA)	2017-2022	BEIS	N/A	£5 million

97 Country spending based on the estimated percentage share of FCDO support to CGIAR, calculated by FCDO. Only includes 2016-20 as figures for 2021 were not available.

98 UKRI's funding model does not allow for breaking down funding within a research project by country in which the funding was spent. Therefore, values of BEIS projects in Annex 2 correspond to the total project value.

Malawi Programmes	Dates	Dept	Themes	Value
Support to the International Agriculture Research Centres (SIARC)	2016-2023	FCDO	Climate-smart agriculture, Nutrition-sensitive agriculture	£0.3 million[99]
Strengthening capacity in environmental physics, hydrology and statistics for conservation agriculture research (CEPHaS)	2017-2022	BEIS	N/A	£5 million
Total				**£332 million**

Rwanda programmes	Dates	Dept	Themes	Value
Programme of Support to Agriculture in Rwanda (POSA)	2014-2020	FCDO	All	£43 million
The Future of Agriculture in Rwanda (FAiR)	2019-2022	FCDO	All	£29 million
Sustainable Inclusive Livelihoods through Tea Production in Rwanda (SILTPR)	2016-2025	FCDO	Smallholder commercialisation	£12 million
Improving Market Systems for Agriculture in Rwanda (IMSAR)	2015-2022	FCDO	Smallholder commercialisation	£17 million
Africa Division funding to AgDevCo (African Agriculture Development Company)	2013-2022	FCDO	Smallholder commercialisation	£13 million
UK Support to Access to Finance Rwanda (AFR)	2016-2021	FCDO	Smallholder commercialisation, gender	£10 million
Provision to the Rwanda Fund for Climate Change and Environment	2013-2020	FCDO	All	£25 million
Commercial Agriculture for Smallholders and Agribusiness (CASA)	2017-2024	FCDO	All	£1.7 million
Support to CGIAR (formerly the Consultative Group on International Agricultural Research)	2017-2022	FCDO	Climate-smart agriculture, nutrition-sensitive agriculture, gender	£14.7 million[100]
Support to the International Agriculture Research Centres (SIARC)	2016-2023	FCDO	Climate-smart agriculture, nutrition-sensitive agriculture	£0.45 million[101]

99 This figure represents spending on the Plantwise component of the SIARC programme in Malawi between 2016 and 2020.
100 Country spending based on the estimated percentage share of FCDO support to CGIAR, calculated by FCDO. Only includes 2016-20 as figures for 2021 were not available.
101 This figure represents spending on the Plantwise component of the SIARC programme in Rwanda between 2016 and 2020.

Rwanda programmes	Dates	Dept	Themes	Value
Support to TradeMark East Africa (TMEA) Rwanda	2017-2023	FCDO	Smallholder commercialisation, gender	£25 million[102]
Rwanda Land Tenure Regularisation Programme	2009-2019	FCDO	Gender	£31 million
African Centre of Excellence for Sustainable Cooling and Cold-Chain (ACES)	2019-2025	Defra	Nutrition-sensitive agriculture	£9.5 million
Targeting virus transmission in a vital crop for African food security	2017-2019	BEIS	Nutrition-sensitive agriculture	£0.6 million
Developing a strategy for cysticercosis control in Rwanda, to reduce the burden of epilepsy	2017-2019	BEIS	N/A	£0.50 million
Total				**£261.5 million**

Nigeria programmes	Dates	Dept	Themes	Value
Financial Sector Deepening Africa (FSDA)	2017-2030	FCDO	Smallholder commercialisation	£8.6 million
Powering Economic Growth in Northern Nigeria (LINKS)	2018-2026	FCDO	Smallholder commercialisation	£70 million
Manufacturing Africa – Foreign Direct Investment	2017-2027	FCDO	Smallholder commercialisation	£1.72 million
Market Development in the Niger Delta (MADE)	2014-2020	FCDO	Smallholder commercialisation	£21 million
Promoting Learning in Agribusiness using New Technologies (PLANT)	2019-2020	FCDO	Smallholder commercialisation	£0.25 million
Propcom Mai-karfi	2013-2022	FCDO	Climate-smart agriculture	£46 million
Partnering for Accelerated Climate Transitions (UK PACT)	2018-2022	BEIS	Climate-smart agriculture	£6.04 million
West Africa Food Markets Pilot Programme	2013-2019	FCDO	Smallholder commercialisation	£14.3 million
British International Investment (BII) investments in agriculture (Sahel Capital)	2016-2021	BII	Smallholder commercialisation	~£12 million
Healthy And Sustainable Agriculture of Cassava in Nigeria	2020-2021	BEIS	N/A	£0.27 million

102 Only £16m has been spent on TMEA between 2017 and 2023. A no-cost extension has been granted to continue activities beyond 2023.

Nigeria programmes	Dates	Dept	Themes	Value
Mechanisms and genetics of iron toxicity tolerance in African rice	2018-2020	BEIS	N/A	£0.9 million
GLTEN Africa: Cropping system diversity, a cornerstone of sustainable intensification	2018-2021	BEIS	N/A	£0.7 million
Keying into a new vision for agriculture – building sustainable partnerships for agriculture in the south west of Nigeria	2016-2017	BEIS	N/A	£0.04 million
Epidemiological Modelling of Simultaneous Control of Multiple Cassava Virus Diseases	2017-2020	BEIS	N/A	£0.3 million
Community Network for African vector-borne plant viruses (CONNECTED)	2017-2022	BEIS	N/A	£1 million
Satellite data for Weather Index Insurance-Agricultural Early Warning System (SatWIN-ALERT)	2018-2021	BEIS	N/A	£0.3 million
Resilience In Groundwater Supply Systems: integrating resource-based approaches with agency, behaviour and choice in West Africa	2016-2017	BEIS	N/A	£0.2 million
Recirculate: Driving eco-innovation in Africa: capacity-building for a safe circular water economy	2017-2022	BEIS	N/A	£5 million
Total				**£188.6 million**

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