



A MAPPING AND ANALYSIS OF UK-FUNDED FELLOWSHIPS AND SCHOLARSHIPS FOR AFRICA

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About UKCDR

UK Collaborative on Development Research (UKCDR) is a collaborative of government and research funders working in international development, governed by the Strategic Coherence for ODA-funded Research (SCOR) Board. Our core contributing members include the Department for Business, Energy and Industrial Strategy (BEIS); the Department for International Development (DFID); the Department of Health and Social Care (DHSC); UK Research and Innovation (UKRI); and Wellcome. UKCDR exists to amplify the value and impact of research for global development by promoting coherence, collaboration and joint action among UK research funders.

For further information on UKCDR, please visit ukcdr.org.uk.

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List of abbreviations and acronyms

AAS	African Academy of Sciences	HRCS	Health Research Capacity Strengthening initiative
ACBI	Africa Capacity Building Initiative	India Alliance	Wellcome Trust/DBT India Alliance
ACU	The Association of Commonwealth Universities	LMICs	Low and Middle-Income Countries
AMS	Academy of Medical Sciences	NIHR	National Institute for Health Research
AII	African Institutions Initiative	NRF	National Research Foundation, South Africa
AIMF	Africa-India Mobility Fund	NRI	Natural Resources Institute
AMR	Antimicrobial Resistance	GHR	Global Health Research
BEIS	Department for Business, Energy and Industrial Strategy	ODA	Official Development Assistance
CIRCLE	Climate Impacts Research Capacity and Leadership Enhancement	OR	Operational Research
CSC	Commonwealth Scholarship Commission in the UK	QECS	Queen Elizabeth Commonwealth Scholarships
CVFP	CIRCLE Visiting Fellowships Programme	SASAC	Southern African Systems Analysis Consortium
DELTAS	Developing Excellence in Leadership, Teaching and Science	SCOR	Strategic Coherence for ODA-funded Research
DFID	Department for International Development	SDG	Sustainable Development Goal
DHSC	Department of Health and Social Care	UKCDR	UK Collaborative on Development Research
FCO	Foreign & Commonwealth Office	UKRI	UK Research and Innovation
FLAIR	Future Leaders - African Independent Research	The Union	International Union Against Tuberculosis and Lung Disease
GCRF	Global Challenges Research Fund	UUKI	Universities UK International
HMG	Her Majesty's Government		

Executive Summary

UKCDR have undertaken a mapping and analysis of UK investments in Master's, PhD, postdoctoral and early career awards that support African fellows and scholars between 2014-2019. This report presents an overview of UK investments, learning on models, approaches, evaluation and impact across schemes, and identifies gaps and opportunities for the future.

Through this work, UKCDR aims to contribute to improving research capacity in Africa and enhance the UK Government's new and distinctive commitment to work alongside, invest in and partner with African nations. In particular, driving greater coherence and impact across UK's investments in science, technology and innovation, as well as supporting long-term research partnerships between UK and African institutions.

There is strong demand to strengthen African capacity to design and deliver research required to achieve the United Nations Sustainable Development Goals (SDGs). The UK has a long history of supporting research capacity strengthening (RCS) in Africa. As part of this investment, UK government departments, charitable foundations and universities currently operate a range of competitive fellowship and scholarship schemes which select high-achieving and highly-motivated African candidates for postgraduate and early career training in the UK, Africa and beyond. Recent new initiatives in UK Official Development Assistance (ODA) have added to this portfolio.

UKCDR selected to analyse 17 fellowship and scholarship schemes funded by the UK between 2014 and 2019, using desk-based research, quantitative funding data analysis, qualitative analysis and a workshop bringing together over 40 stakeholders and experts to discuss recommendations for the future. This revealed the following findings:

- Through these schemes, four UK Government departments - Department for Business, Energy and Industrial Strategy (BEIS), Department for International Development (DFID), Department of Health and Social Care (DHSC) and the Foreign & Commonwealth Office (FCO) - and Wellcome invested and co-invested over £190.8m, supporting 5,633 African fellows and scholars.
- The majority of awards (75.8%) were Master's degrees, mainly provided by DFID's Commonwealth Scholarships and FCO's Chevening Scholarships. PhD, postdoctoral and early career were a support a smaller part of the UK portfolio through newer schemes e.g. Developing Excellence in Leadership Training and Science (DELTAS) and Newton Fund International and Advanced Fellowships.
- Most awards were given for study in the UK (81.8%) and there is a noticeable increase in recent schemes to support training in African institutions. Approximately 19% of awards were hosted in African institutions, mainly in Kenya and South Africa. Just under 3% of UK support went to split-site fellowships between African and UK partner institutions, with one Africa-Africa pairing.
- Geographical distribution of funding showed that most awards go to a small set of African countries. Fellows and scholars from Nigeria (868) received the most awards, followed by Kenya (662), Ghana (535), South Africa (484), Egypt (480) and Uganda (445), accounting for over 60% accumulatively. Regionally, there is greater distribution of awards in West and East Africa.
- Thematically, there was a focus of awards in medical and health sciences (30%) as

nearly half of the UK schemes and key funders involved are health-focused. Generally, more awards went to science, technology, engineering and mathematics (STEM) subjects compared to social sciences.

- Analysis of gender distribution found that 43.3% of awards went to African women and 55% to African men, and Master's and early career awards are achieving better gender distribution than PHD and post-doctoral awards.
- Longstanding UK schemes have valuable evaluation expertise and capacity to monitor and measure outputs and outcomes, including tracking over long time periods. Several schemes provided evidence of individual scientific achievements, personal career advancement, improved international research collaborations, institutional capacity development and contributions to policy making. However, robust evidence of impact remains a challenge.
- Brain drain is a widely recognised concern in the field of RCS, but several schemes (such as Commonwealth and Chevening scholarships) showed evidence of high levels of return of fellows to their home countries following training abroad.

This analysis identified **five key opportunities for improving UK investment in fellowships and scholarships in Africa** in support of RCS:

1. Expanding PHD/postdoctoral/early career support through Africa-based and led models that integrate fellowships and scholarships schemes with RCS at an institutional level.
2. Cross-scheme alumni networks within specific African countries or in regions to support research careers.
3. Developing and sharing common approaches to evaluation of fellowship and scholarship schemes to ensure quality and consistency in evaluating the overall impact of UK support to RCS.
4. Sharing of resources on schemes through a common platform.
5. Common branding across UK-funded schemes to increase visibility of UK support for RCS in Africa and to support future UK engagement with African governments and regional institutions as part of the UK Government's new partnerships with Africa.

1 Introduction

There is a strong need and desire to strengthen African capacity to design and deliver research to meet the United Nations Sustainable Development Goals (SDGs). Africa has an average of 500 researchers per million inhabitants, about a tenth that of European countries¹, and the need for further development is recognised within Africa, and internationally. The Kenya Commission for University Education 2014's estimate that Kenya needed about 1,000 new PhDs annually² and South Africa's National Development Plan 2030 which aims to increase current PhD registrations to 5,000 per year³, both at least doubling current rates. The global higher education sector acknowledges the importance and economic value of supporting the development of the knowledge society and has fed back into this demand.⁴ This is also part of a wider appreciation that researchers are essential to foster innovation and continue to provide momentum for scientific output⁵, as referenced in the Continent Education Strategy for Africa 2016-25.⁶

In the context of research capacity strengthening (RCS) at individual, institutional and environmental/systems levels, fellowships and scholarships constitute individual level investments.⁷ It is widely recognised that individual investments have improved impact when integrated with investment in strengthening institutions and systems for research capacity.⁸ Theories of change for fellowship and scholarship investments also recognise the contribution of individual capacity building to improving institutional capacity and influencing research environments and systems.⁹ The support of fellowship and scholarship schemes directly contribute to 'SDG 4 - Quality Education' particularly SDG 4b, to "substantially expand globally the number of scholarships available to developing countries"¹⁰. Additionally, efforts to attain gender parity in enrolment is a key activity feeding into 'SDG 5 - Gender Equality'.

UK government departments, charitable foundations and universities have a long history of supporting RCS in African countries. Currently a range of competitive fellowship and scholarship schemes select high-achieving and highly-motivated candidates for postgraduate and early career training in UK and African institutions. New initiatives through UK Official Development Assistance (ODA) have added to this portfolio. Operating independently, often with different procedures but similar areas of geographical and subject-matter focus, these RCS investments are important to the transformation of research for development in Africa, and to creating sustainable, equitable, research partnerships between UK and African institutions.

1 [Researchers in R&D \(per million people\)](#) - Country Ranking, Index Mundi

2 Commission for University Education in Kenya, Statistics (2018)

3 [South Africa National Development Plan 2030](#)

4 [Building PhD capacity in Sub-Saharan Africa](#), DAAD / British Council Report, p. 4.

5 Ibid.

6 [Continental Education Strategy for Africa 16-25](#), Strategic Objective 9.

7 Definition of RCS levels in UKCDR (2015), [Rapid mapping of international funders' research capacity strengthening priorities](#).

8 DFID (2010) [Capacity Building in Research](#). DFID Practice Paper

9 Dassin, R.J., Marsh R.R., Mawer, M. (eds.), *International Scholarships in Higher Education: Pathways to Social Change* (2018)

10 Balfour, S. (2016) [SDG Target 4b: a global measure of scholarships](#) – Background paper prepared for the 2016 Global Education Monitoring Report Education for people and planet: Creating sustainable futures for all (UNESCO).

UKCDR has sought to better understand UK-supported fellowship schemes and initiatives to enhance the UK Government's new and distinctive commitment to work alongside, invest in and partner with African nations. Announced by former UK Prime Minister Theresa May in 2018, it aims to drive greater coherence and impact across the UK's investments on science, technology and innovation (STI) in Africa. This is led through new platforms in Kenya, Nigeria and South Africa, bringing together UK government teams, including the Science and Innovation Network (SIN), the Department for Digital, Culture, Media and Sport (DCMS) and the Department for International Development (DFID).

The UK's approach will increase understanding and raise the visibility of UK investments and support broader and deeper STI partnerships between Africa and the UK. Strengthening institutional capacity in Africa is a long-term endeavour¹¹, and fellowship and scholarship schemes contribute to this process. By better understanding the coverage of these schemes, identifying successful practices to share, and highlighting opportunities for better coordination and RCS gaps which can be addressed, the UK investment in African fellowship and scholarship schemes can make effective contributions to the new UK Government partnerships with Africa.

¹¹ Transforming the Institutional Landscape in Sub-Saharan Africa: Considerations for Leveraging Africa's Research Capacity to Achieve Socioeconomic Development, p.45.

2. Objectives

The objectives of the mapping were to:

- provide an overview of the numbers and types/levels of postgraduate fellowships and scholarships for Africa, supported by UK-funded schemes.
- collate learning on approaches, evaluation, and impact across schemes.
- use this information as the basis for convening implementing institutions to discuss potential action in relation to gaps in support and opportunities to add value.

This report aims to contribute to fulfilling Her Majesty's Government (HMG) Strategic Coherence for ODA-funded Research (SCOR) Board¹² objectives to establish greater coherence of the UK's ODA funded research. Secondly, to support the UK Government's partnerships with Africa, by increasing visibility of research and development (R&D) investments in-country, and helping to identify gaps and opportunities for further strategic engagement among funders.

We anticipate that funders and delivery partners will also benefit from sharing information on different schemes and their experiences in designing schemes for best development impact. This will create an opportunity to explore how these schemes might be better linked to strengthen UK-Africa partnerships and their impact at the national and international scale.

This work also links to UKCDR-led in-depth analysis of [UK investments in Kenya, Nigeria and South Africa](#)¹³, also in support of the UK Government new partnerships with Africa.

¹² [Strategic Coherence for ODA Research \(SCOR\) Board](#)

¹³ [New UKCDR reports highlight trends and opportunities for strengthening UK research investment and partnerships with Africa](#), Jan 2020

3. Methodology

The analysis focused on quantitative and qualitative aspects of UK-funded fellowship and scholarship schemes between 2014-2019 to provide a high-level view of these investments, their impact and the relationships involved.

3.1 Classification and scope of fellowship and scholarship schemes

There is no existing classification scheme for fellowship and scholarship schemes, nor do these terms have consistent definitions. The term scholarship is often used to describe funding which leads to award of a degree, while fellowship may be broader and include non-degree related study, hence it is often used to describe postdoctoral and early career support. We include both terms when referring to schemes generally, so as not to cause confusion.

For this mapping, we have included fellowship and scholarship schemes which are either “discrete”, providing opportunities for training in one or, more usually, a range of institutions in the UK or Africa, or “embedded” in larger research and/or RCS programmes in Africa. In both cases we have selected stand-alone schemes that support distinct cohorts of fellows or scholars. We do not include training opportunities provided to individuals as part of a specific research project. Extracting all grant information at the university and research institute level was beyond the resource of this project and data collection challenges involved to do this were recognised. Our focus was on African recipients of awards although many of the schemes were open to recipients from other low- and middle-income countries (LMICs). We did not include UK fellows funded to study in Africa.

The analysis focused on postgraduate training in the UK or Africa by type/level of award defined as follows:

- **Master's** (delivered face-to-face or by distance)
- **PhD** (postgraduate doctoral degree)
- **Postdoctoral** (intended specifically for research after completion of PhD training)
- **Early Career** (supporting researchers in established research positions to gain specific addition research skills)

UK-funded schemes that provide early independence, mid-career¹⁴ or senior leadership fellowships (e.g. the MRC/DFID African Research Leader scheme and Wellcome's International Intermediate Fellowship scheme) were not included in the analysis.

¹⁴ Apart from Newton Advanced fellowships which offer early career to mid-career fellowships. This data was hard to disentangle so all fellowships have been included.

We define types of RCS support as:

- **Individual:** The development of researchers and teams via for example, training, fellowships and scholarships.
- **Institutional:** Supporting research capacity of universities, institutes and think-tanks to fund, manage and sustain their own research through research management, leadership, communications, incentives or infrastructure of organisations.
- **Environmental:** Improving structures and the political and regulatory context under which research is undertaken and used, as well as ensuring research grants embed best practice principles e.g. equitable partnerships

This mapping has a focus on individual level RCS, however, RCS is not the sole objective of some schemes, particularly at the Master's degree level, nor is it necessarily the case that graduates of even the most research-focused schemes will make their individual, institutional and societal contributions to development through research achievements. Our aim was to be inclusive of all schemes that could strengthen research capacity.

Data was collected on fellowships and scholarships funded over the last five years (April 2014 – March 2019). This period included the start of the Newton Fund in 2014 and redistribution of ODA across Government departments in 2015. Some schemes are more established, while some newer schemes operated for only a fraction of this period.

3.2 Approaches

The project team used the following approaches to understand UK investments into fellowship schemes:

Desk-based research – used to understand the context for fellowships and scholarships and research career pathways in Africa, key international schemes and approaches to evaluation.

Quantitative funding data analysis (of UK funding data) – conducted of data obtained from implementing partners of the Department for Business, Energy and Industrial Strategy (BEIS), DFID, Department of Health and Social Care (DHSC), Foreign & Commonwealth Office (FCO) and Wellcome on 1) how much is being invested in fellowship schemes; 2) the number and type of fellows; 3) institutions; 4) countries; and 5) thematic areas of focus.

A standard template was provided, and thorough data cleaning processes were applied. Table 1.13 in the Annex contains a data dictionary outlining the variables that were requested from implementing partners, and their respective definitions.

Qualitative analysis – surveys were sent to implementing partners to understand models/approaches, selection processes, evaluation and impact methods, and future plans. Selected UK universities and charities were sent the same survey with an additional request to share high level aggregated data.

Workshop – in October 2019 we brought together key funders, implementers and African fellows from UK-funded fellowships schemes, as well as other relevant experts/stakeholders, to reflect on the findings from the analysis, discuss opportunities to add value to UK investments, and actions to address gaps.

3.3 Data limitations

For the mapping 23 schemes were identified but the analysis focuses on 17 schemes in total. Three schemes fell out of the scope of the mapping as fellowships were due to start later in 2019 - Future Leaders – African Independent Research (FLAIR) (funded by GCRF), African Academy of Science's (AAS) Science and Language Mobility Scheme Africa (funded by Wellcome) and the DHSC funded TDR Structured Operational Research and Training Initiative (SORT IT) scheme. In addition, two schemes were unable to provide data in the project timeframe or due to data limitations - Partnership for African Social and Governance Research (PASGR) funded by DFID and the Royal Academy of Engineering (RAEng) Engineering for Development Research Fellowships funded by BEIS through the Global Challenges Research Fund (GCRF). The Africa Research Excellence Fund (AREF) was not included in the analysis as no full fellowships had been supported with UK funding. High-level information on FLAIR investments, however, can be found in Box 1 because data was provided and learning from their programme has been incorporated in Section 5 on learning across programmes.

All schemes focus on Master's, PhD, postdoctoral and early career awards except for Newton Advanced Fellowships which offer early career and mid-career fellowships which was included in the mapping. Not all the data was in the same format and featured varying degrees of completeness and/or aggregation. This means that certain aspects of the analysis could not incorporate data from all schemes.

For those implementing partners that provided country information only, fellows and scholars from the diaspora may have been omitted from the dataset because no nationality data was provided to determine their inclusion. Some implementing partners were not able to provide all the requested data (e.g. nationality) due to their internal GDPR regulations and practices and two schemes combined type of award as these could not be disentangled e.g. PhD/postdoctoral and early/mid-career. In the datasets provided, all fellows and scholars were associated with their African nationality and/or country of base.

Each organisation was given the same definitions of Master's, PhD, postdoctoral and early career awards in the data dictionary (see Table 1.13 in Annex) and completed their dataset based on this. These definitions may have been open to different interpretations by organisations providing the data returns and there may be overlap between the various career stages by which awards are classified. Future mapping could look more closely at each fellowship and scholarship categorisation for accuracy, but this would require more resource effort and time.

Of 17 schemes surveyed, 15 provided responses to varying degrees of depth and detail. Therefore, this summary should be taken as indicative, and comparisons between schemes has not been attempted. We also received four out of six survey responses¹⁵ from selected UK universities and charities and information from three out of five Research England universities funded through GCRF.

More information on data limitations are highlighted throughout the report. Tables 1.11 and 1.12 in the Annex provide a summary of the data that was received by each scheme.

15 Rhodes Scholarships and Canon Collins Educational and Legal Assistance Trust were unable to provide data in the timeframe.

4. UK fellowship and scholarship investments in Africa

In this section we use the quantitative data provided by schemes to generate a picture of the fellowships and scholarships provided to African awardees between 2014 and 2019. For each table and figure presented we indicate dataset variations, according to which schemes provided the specific information requested.

4.1 What are the major UK-funded fellowship schemes in Africa?

This mapping focuses on international fellowships and scholarship schemes open to African researchers funded by UKCDR members, spanning UK government departments and Wellcome. We have captured the UK's largest fellowship and scholarship schemes offering support to African awardees, as well as the distribution of ODA funds. We have not covered the large number of smaller schemes supported, and funded by, individual UK universities, foundations and charities, in the analysis but we do review a selection of these in Section 6 to contextualise the UK's investment in the wider ecosystem.

Between April 2014 and March 2019, 17 fellowship and scholarship schemes that support African researchers have been funded by UKCDR members through 16 different implementing partners (Table 1).

Table 1: UK-funded fellowship and scholarship schemes (2014-19)

Funder/s	Scheme	Implementing Partner/s	ODA
BEIS	The Rutherford Fund	British Academy Universities UK International (UUKI) The Association of Commonwealth Universities (ACU) ¹⁶ .	Non-ODA
BEIS	Newton International Fellowships	Royal Society Academy of Medical Sciences (AMS) British Academy	Both
BEIS	Newton Advanced Fellowships	Royal Society AMS British Academy	Both
BEIS National Research Foundation (NRF) South Africa Egyptian Cultural Affairs and Missions Sector	Newton PhD Programme	British Council Southern African Systems Analysis Consortium (SASAC) Egyptian Cultural Affairs and Missions Sector	ODA

¹⁶ Other implementing partners for the Rutherford Fund included UKRI, the Francis Crick and the Alan Turing Institute, British Library, Science Museum, Natural History Museum and Tate Group, but to date their schemes have not supported African candidates.

Funder/s	Scheme	Implementing Partner/s	ODA
BEIS Waitrose	Blue Charter Fellowships	ACU	Both
DFID	Commonwealth Scholarships	Commonwealth Scholarships Commission (CSC) in the UK ACU	ODA
DFID	Africa Capacity Building Initiative (ACBI)*	Royal Society	ODA
DFID	Climate Impacts Research Capacity and Leadership Enhancement (CIRCLE) Visiting Fellowship Programme (VFP)*	ACU AAS ¹⁷ National Resources Institute (NRI) at the University of Greenwich and Vitae	ODA
DFID	Operational Research (OR) Fellowship Programme*	International Union Against Tuberculosis and Lung Disease (The Union), Paris, France	ODA
DHSC	Global Health Research National Institute for Health Research (GHR NIHR) Academy Members (embedded in GHR NIHR Units and Groups)*	NIHR	ODA
Wellcome	Africa Institutes Initiative (All)*	Wellcome	Non-ODA
Wellcome DFID	Developing Excellence in Leadership Training and Science (DELTAS)*	AAS	Both
Wellcome, DHSC through the NIHR (Since 2019) ¹⁸	International Master's and Training Fellowships	Wellcome	Both
Wellcome	Africa - India Mobility Fund (AIMF)	AAS Wellcome /DBT India Alliance (India Alliance)	Non-ODA
Wellcome DFID IDRC	Health research capacity strengthening (HRCS) initiative*	Wellcome	Both
Foreign & Commonwealth Office (FCO)	Chevening Scholarships	Chevening Secretariat (ACU currently contracted to administer Chevening)	Both
FCO and 13 other Commonwealth Governments ¹⁹	Queen Elizabeth Commonwealth Scholarships (QECS)	ACU	Both

*Denotes embedded schemes

The following schemes fell out of the scope of this mapping:

- FLAIR fellowships funded by BEIS (through GCRF ODA) and delivered by Royal Society and AAS were awarded in April 2019.
- The AAS Science and Language Mobility Scheme Africa (funded by Wellcome) -

¹⁷ All AAS programmes are implemented through the Alliance for Accelerating Excellence in Science for Africa (AESA), an initiative of the AAS and the New Partnership for Africa's Development (NEPAD) Agency.

¹⁸ [NIHR-Wellcome Global Health Research Partnership](#)

¹⁹ The UK's Department for Education (DfE) also invested £5m in 2018 which will be used to support fellowships in 2019.

majority of the six fellowships start after March 2019.

- TDR AMR SORT IT scheme (funded by DHSC) - will train fellows from six LMICs including Uganda, Ghana and Sierra Leone. Selection of individuals was ongoing at the time of reporting.
- PASGR (funded by DFID) - unable to provide data in time or due to data limitations.
- RAEng Engineering for Development Research Fellowships (funded by BEIS through GCRF) - unable to provide data in time or due to data limitations.
- AREF - no full fellowships had been supported by the UK. MRC-UKRI does support AREF by funding core activities and some salaries at c.£400k per year, and Wellcome has awarded £25,000 per year for three years.

Table 1.1 in the Annex provides an overview of UK-funded fellows and scholar schemes for African researchers and their objectives. All schemes are directed at strengthening African capacity and some also seek to enhance long-term links between African and UK researchers and institutions, in line with the UK aid strategy²⁰. Some, like the Rutherford Fund and Chevening Scholarships, place emphasis on building long-term links. Most have a particular focus on strengthening scientific research capacity, particularly those supporting PhD, postdoctoral and early career training, while others have broader aims, particularly Master's level schemes, where training may not be directly linked to research careers and research capacity.

Most schemes are globally focused, with four Africa specific e.g. DELTAS, ACBI, CIRCLE and All (Table 1). The latter was completed in 2017 and FLAIR is a new Africa-focused scheme that began in 2018 (with first fellowships starting in April 2019) – see Box 1. Thematically, seven schemes were health-focused and four were open to all subjects. Others were more specific, for instance, CSC (since 2018) invites applications under six SDG-related areas, while CIRCLE has a specific focus on climate change research. Many aimed to promote interdisciplinary research.

Most have UK implementing partners/administrators. ACU administer the most schemes with five and the Royal Society run three. There were three implementing partners in Africa, with the African Academy of Sciences (AAS) implementing three of the schemes.

20 DFID and HM Treasury (Nov 2015) [UK aid: tackling global challenges in the national interest](#)

Box 1 - Future Leaders – African Independent Research (FLAIR) Fellowships

FLAIR Fellowships is a new fellowship scheme in partnership between AAS and the Royal Society, supported by GCRF funding.

The scheme is for talented African early career researchers who have the potential to become leaders in their field. FLAIR provides the opportunity to build an independent research career in a sub-Saharan African institution and to undertake cutting-edge scientific research to address global challenges facing developing countries.

The 29 inaugural FLAIR fellows (18 males and 11 females) were selected from a competitive pool of more than 700 applicants and were awarded a total of £8.1m and began their two-year fellowships in April 2019. Overall, 12 of the 29 funded fellows came from South Africa, representing the most commonly-funded nationality, followed by Kenya (6), Nigeria (3), Cameroon, Zimbabwe (2), Democratic Republic of the Congo (DRC), Ethiopia, Rwanda and Senegal (1). Fellows were hosted at African-based institutes including 16 in South Africa (University of Cape Town with seven fellows and Stellenbosch University with two), six in Kenya, two in Nigeria, and one in Botswana, DRC, Gambia, Senegal and Zimbabwe. See Table 1.10 in the Annex for a full list of African host institutions supported by FLAIR in the inaugural round.

4.2 How much has the UK invested in African fellowships and scholarships?

In Table 2, the schemes are listed with the total number of awards to African fellows and scholars between 2014 and 2019 and the funding provided. The UK invested or co-invested over £190.8m²¹ towards supporting 5,633 African fellows and scholars over the last five financial years. The largest number of African fellows and scholars were funded by DFID's Commonwealth Scholarships (2,385 scholars) and FCO's Chevening Scholarships (1,946 scholars). This accounts for 76.9% of the total African fellows and scholars funded by the UK. Schemes are different lengths for different types of awards and the financial support provided varies by scheme e.g. salaries, research expenses, cost of living.

21 This total does not include funding from DHSC for GHR NIHR Academy Members and Wellcome's funding for All fellows. This figure represents spending so far as some schemes are ongoing e.g. DELTAS to 2020. FLAIR's total of c.£10.7m (£8.1m by Royal Society) has not been included.

Table 2: Funding and awards to African fellows and scholars by UK-funded schemes (2014-19)

Funder/s	Scheme Name	Total Number of Fellows	Overall Award Amount ²²
BEIS	Rutherford Fund	27	£729,076
BEIS and Waitrose	Blue Charter Fellowships	16	£154,538
BEIS	Newton International Fellowships	14	£1,357,181
BEIS	Newton Advanced Fellowships	46	£4,088,219
BEIS, NRF (South Africa), Egyptian Cultural Affairs and Missions Sector	Newton PhD Programme	210	£12,404,782
	BEIS Total	313	£18,733,797
DFID	CIRCLE VFP	97	£1,975,355
DFID	Commonwealth Scholarships	2385	£85,401,800 ²³
DFID	ACBI	39	£2,013,126
DFID	OR Fellowships Programme	2	£13,000
	DFID Total	2,523	£89,403,281
DHSC	GHR NIHR Academy Members	72	{not provided}
	DHSC Total	72	{not provided}
FCO	Chevening Scholarships	1,946	£53,956,856 ²⁴
FCO and 13 other Commonwealth Governments ²⁵	QECS	71	£1,137,012
	FCO Total	2,017	£55,093,868
Wellcome	AIMF	4	£20,042
Wellcome	All	42	{not provided}
Wellcome and DFID	DELTAS	574	£15,118,578 ²⁶
Wellcome, DFID and IDRC	HRCS Initiative	16	£469,656 ²⁷
Wellcome and since 2019 DHSC/NIHR	International Master's and Training Fellowships	72	£13,149,903 ²⁸
	Wellcome Total	708	£28,758,179
	Grand Total	5,633	£190,852,113

Totals may not add due to rounding

22 The overall amount awarded represents funding associated with the key funder/scheme but may include co-funding from other organisations (UK or international).

23 DFID's Commonwealth Scholarships total includes UK universities hosting awards contribution to the programme. DFID's total contribution was £72,725,926.

24 This figure relates to the period of these individuals' academic studies rather than financial years. This total is based on the cost for the 1,946 scholars enrolled on the Chevening programme during 2014-9, including 8 who did not complete their studies.

25 In the last decade 14 governments have donated money into an Endowment Fund which currently stands at £16.3 million. The UK's Department for Education (DfE) invested £5m in 2018 into this fund which will be used from 2019. This extra investment will fund around 7 additional scholars a year.

26 Overall funding for DELTAS is £60m (55m from Wellcome and 5m from DFID).

27 Although the HRCS initiative is co-funded, only Wellcome funded the 16 fellowships.

28 Wellcome's International Master's and Training Fellowships total also includes some funding from the Association of Physicians of Great Britain and Ireland.

4.3 What type of postgraduate awards has the UK funded?

Table 3 shows the distribution of awards of different types across schemes. The majority (75.8%) of awards were Master's degrees (4,272 awards), mainly through the long-standing Commonwealth (1,949 awards) and Chevening (1,946 awards) Scholarships schemes. PhDs were the second most supported award (960 awards) accounting for 17% of awards mainly through Commonwealth Scholarships and DELTAS. Postdoctoral and early career support has been a feature of more recent schemes, e.g. CIRCLE, DELTAS, Newton International and Advanced Fellowships.

Table 3: Type of awards to African fellows and scholars by UK-funded scheme (2014-19)²⁹

Funder	Scheme Name	Master's Degree	PhD	PhD/ Postdoctoral	Postdoctoral	Early Career	Early/ Mid-Career	Total
BEIS	Rutherford Fund	-	-	-	17	10	-	27
BEIS and Waitrose	Blue Charter Fellowships	-	-	-	-	16	-	16
BEIS	Newton International Fellowships	-	-	-	14	-	-	14
BEIS	Newton Advanced Fellowships	-	-	-	-	-	46	46
BEIS, NRF (South Africa), Egyptian Cultural Affairs and Missions Sector	Newton PhD Programme	-	210	-	-	-	-	210
	BEIS TOTAL	-	210	-	31	26	46	313
DFID	CIRCLE VFP	-	-	-	-	97	-	97
DFID	Commonwealth Scholarships	1949	384	-	-	52	-	2385
DFID	ACBI	-	39	-	-	-	-	39
DFID	OR Fellowships Programme	-	-	-	-	2	-	2
	DFID Total	1949	423	-	-	151	-	2523
DHSC	GHR NIHR Academy Members	30	32	-	10	-	-	72
	DHSC Total	30	32	-	10	-	-	72

²⁹ This figure includes combined categorises of PhD/Postdoctoral and early/mid-Career as Wellcome International Training Fellowships and Newton Advanced Fellowships schemes respectively, can be used to obtain either. Implementing partners were unable to distinguish type/level of award for each fellow in these schemes and chose to combine categories.

Funder	Scheme Name	Master's Degree	PhD	PhD/ Postdoctoral	Postdoctoral	Early Career	Early/ Mid-Career	Total
FCO	Chevening Scholarships	1,946	-	-	-	-	-	1,946
FCO and 13 other Commonwealth Governments	QECS	69	2	-	-	-	-	71
	FCO Total	2,015	2	-	-	-	-	2,017
Wellcome	AIMF	-	-	-	-	4	-	4
Wellcome	All	9	30	-	3	-	-	42
Wellcome and DFID	DELTAS	228	263	-	83	-	-	574
Wellcome, DFID and IDRC	HRCS Initiative	-	-	-	16	-	-	16
Wellcome and since 2019 DHSC/ NIHR	International Master's and Training Fellowships	41	-	31	-	-	-	72
	Wellcome Total	278	293	31	102	4	-	708
	Grand total	4,272 (75.8%)	960 (17.0%)	31 (0.6%)	143 (2.5%)	181 (3.2%)	46 (0.8%)	5,633

4.4 Where are fellows being hosted in the UK and Africa?

Schemes differed by whether African participants were hosted in UK or African institutions³⁰. In Table 4, the number of scholarships and fellowships hosted by institutions in UK and Africa are compared. Note that split-site fellowships and scholarships are entered as being hosted both in the UK and Africa and are therefore double counted in this table.

Overall, 81.9% of awards are given for study in the UK (4,611 awards). The overwhelming majority of these (93.9%) through Commonwealth and Chevening scholarships. There is a noticeable shift in more recent schemes supporting fellowships and scholarships in African universities and institutes (either solely or in addition to fellowships and scholarships in the UK or internationally). These included: DELTAS, ACBI, CIRCLE, Newton Advanced Fellowships, GHR NIHR Academy Members, OR Fellowships Programme, QECS, HRCS initiative, which account for 1,080 awards (19.2%). 53% of fellows on these African-based awards were associated with DELTAS (53.1%), demonstrating that DELTAS has significantly contributed to an increase in UK fellowship support within African institutions. Some schemes offer the opportunity for African fellows and scholars to be hosted in either the UK or Africa, or in some cases internationally.

³⁰ For some schemes, determination of host institution is not always straight forward, as some awards are split across a UK or international institution, and an African institution. However, the host institution does not necessarily reflect the organisation awarding a degree or the location of the research, particularly for DELTAS and Wellcome's International Master's and Training. For example, 96 fellows in DELTAS are based at their host institution in Africa but registered in a second university in the UK, Europe or Africa for their award, because their host institution does not confer academic degrees. There are also 763 Distance learners through Commonwealth Scholarships counted as hosted in the UK where they are registered for degrees, but these scholars were based in Africa while doing their five-year Master's degrees at a distance.

Support for Master's study at UK institutions is 13 times that for study at that level in African institutions, mainly through Commonwealth and Chevening scholarships. In contrast, postdoctoral support in African institutions is three times that in UK, largely through DELTAS. There is more balanced support in PhD and early career in both African and UK institutions.

There are 151 split-site fellowships through Newton PhD programme in Egypt (93), Commonwealth Split-site PhD Scholarships (48), and Wellcome's International Master's Fellowships (10), accounting for just under 3% of overall awards. Split-site fellowships is where one site is the individual's home institution and the second is in the UK or in other countries. A breakdown of country pairings for split-site fellows can be found in Table 1.6 in the Annex which shows mainly Africa-UK partnerships (61.6% of which are Egypt-UK pairings), and one Africa-Africa pairing.

Table 4: Type of fellowships and scholarships hosted by institutions in the UK and Africa (2014-19)³¹

	Number of Fellows ³²	
	Africa (1,080)	UK (4,611)
Master's Degree	297	3,911
PhD	444	588
PhD/Postdoctoral	31	-
Postdoctoral	98	29
Early Career	100	71
Early/Mid-Career	46	-
Total³³	1,016	4,599

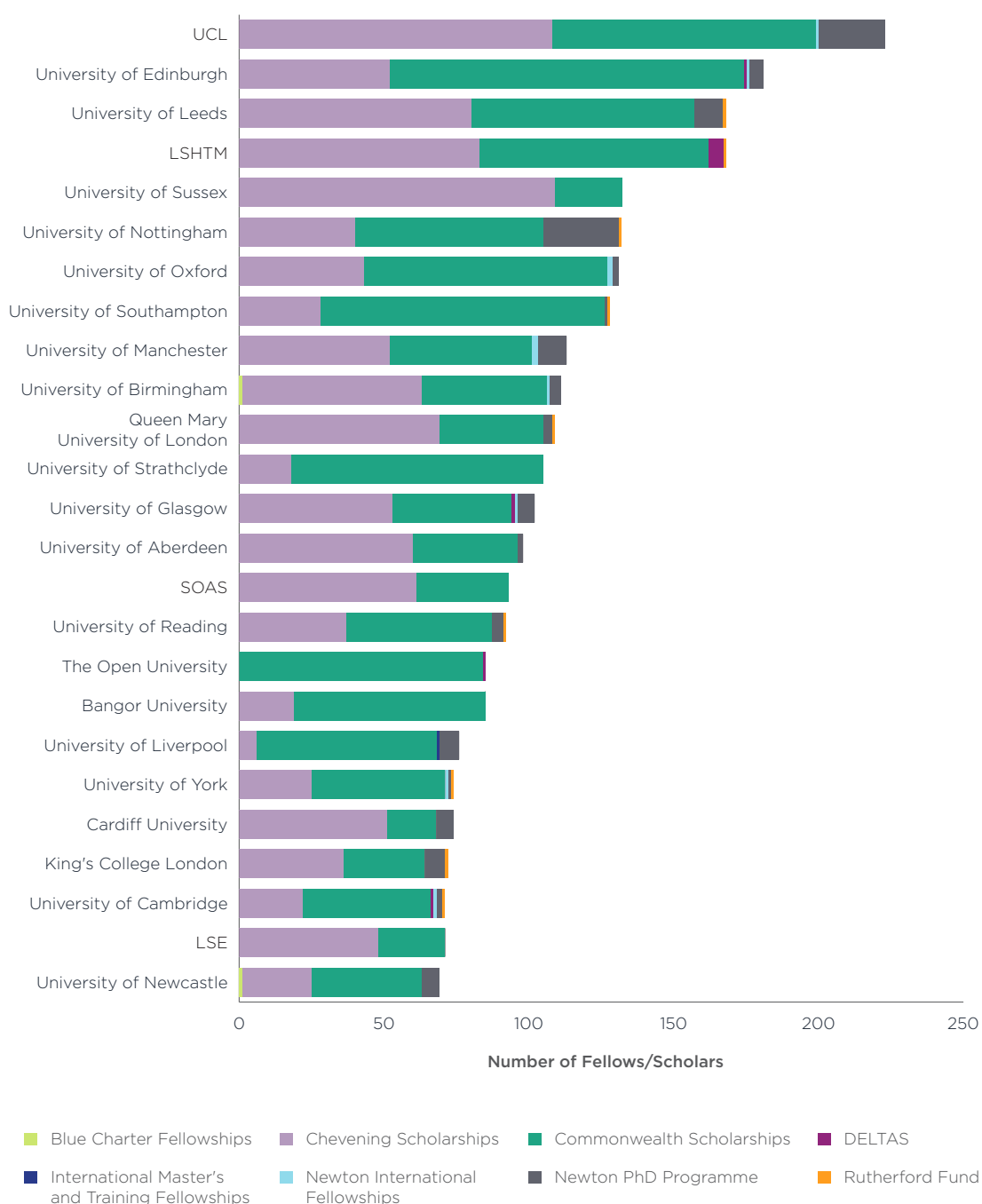
Our analysis also sought to identify the institutions in the UK and Africa where fellowships and scholarships were held. Turning first to fellowships and scholarships hosted in the UK, Figure 1 presents the first 25 UK universities (of 142 universities) hosting African fellows and scholars by number of awards hosted, and the distribution across different schemes. The data shows that schemes support awards in similar UK institutions. The main UK universities hosting were University College London (UCL), University of Edinburgh, University of Leeds and London School of Hygiene and Tropical Medicine (LSHTM). See Table 1.4 in the Annex for a numerical breakdown and comparison of UK host institutions supported by each scheme.

31 This table includes combined categorises of PhD/Postdoctoral and Early/Mid-Career as Wellcome International Training Fellowships and Newton Advanced Fellowships schemes respectively, can be used to obtain either. Implementing partners were unable to distinguish type/level of award for each fellow in these schemes.

32 Some UK-funded fellowships took place outside of the UK and Africa e.g. Pakistan, Canada, Jamaica, Malaysia, Fiji (45 in total) but are not included in Table 4.

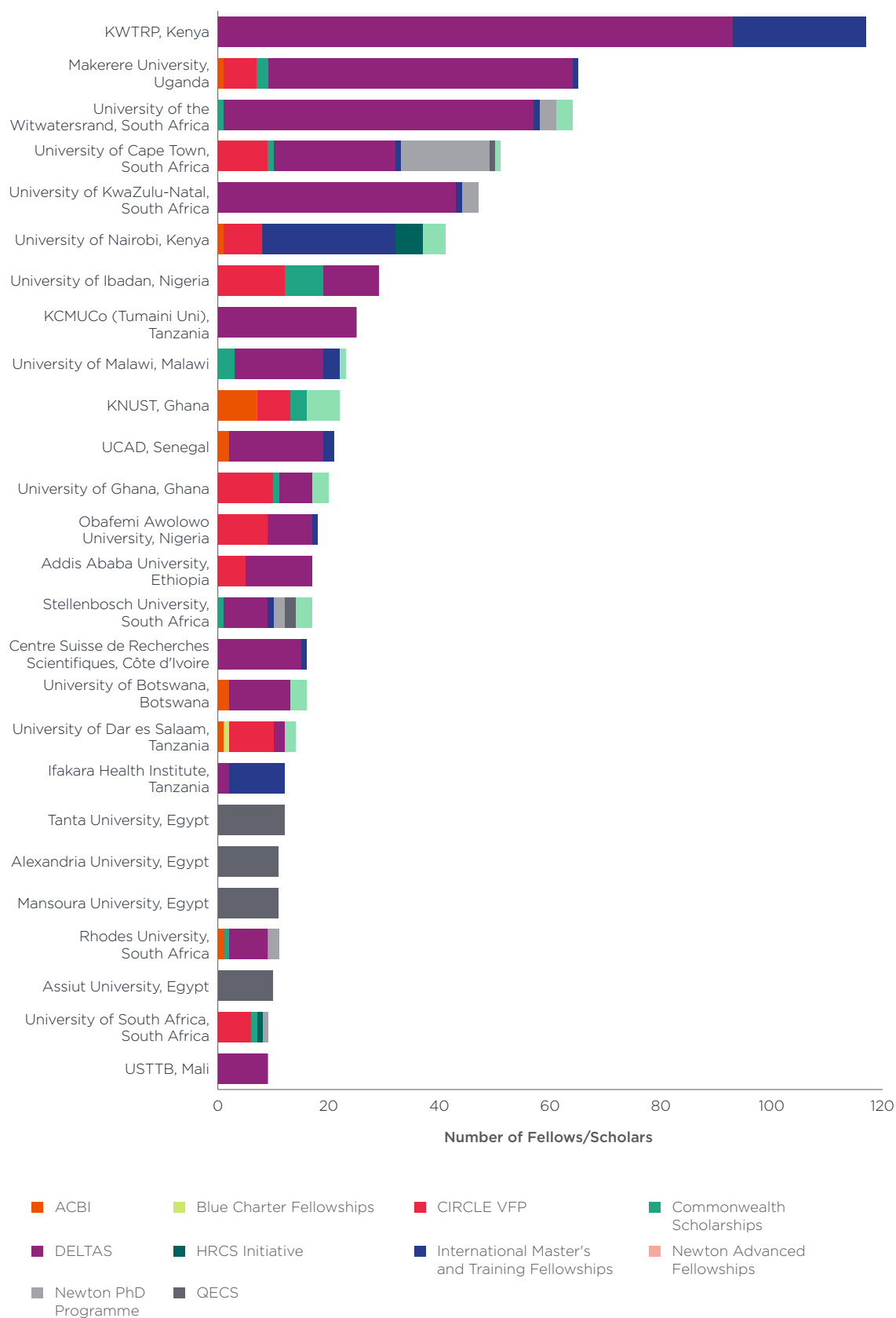
33 Totals in Table 4 varies from overall UK host institution data (4,611 awards) and African host institutions (1,080 awards), as two out of 17 schemes (NIHR and AII) did not disaggregate data by host institution and type of award for each fellow/scholar.

Figure 1: UK institutions by number of African fellows and scholars hosted and scheme, 25/142 institutions shown (2014-19)



For schemes hosting in African institutions, Figure 2 shows the main 25 institutions (of 148) supporting African fellows and scholars and the number of awards to each. Most of these are for health RCS and are institutions linked to consortia-based and Commonwealth-focused schemes. The KEMRI-Wellcome Trust Research Programme (KWTRP) (which is one of Wellcome's long-standing Africa and Asia Programmes) received the most awards, followed by Makerere University (Uganda) and University of the Witwatersrand (South Africa). See Table 1.5 in the Annex for a numerical breakdown and comparison of African host institutions supported by each scheme.

Figure 2: African institutions by number of fellows and scholars hosted and scheme, 25/148 institutions shown (2014-19)



KWTRP = KEMRI-Wellcome Trust Research Programme, KCMUCo = Kilimanjaro Christian Medical University College (Tumaini Uni), KNUST = Kwame Nkrumah University of Science and Technology, UCAD = Université Cheikh Anta Diop, USTTB = University of Science, Technique and Technologies.

A breakdown of all host organisations by country location shows that South Africa (256) and Kenya (215) facilitate the most UK-funded fellowships and scholarships, followed by Egypt (93), Uganda (87), Tanzania (84), Nigeria (73) and Ghana (70) – see Table 1.7 in the Annex. Home/affiliated institutions of fellows could not be analysed due to limited data provided.

4.5 Which nationalities, countries and regions are being supported?

To examine the distribution of awards across African countries, all 5,633 fellows and scholars were categorised by their nationality and/or country of base³⁴, irrespective of whether they have been hosted in African or UK institutions for their programmes of study. Nationality or country data were provided by all schemes for all fellows and scholars (aggregated or disaggregated). The map in Figure 3 indicates the distribution of awards to individuals by African nationality or country of base. Fellows and scholars from Nigeria receive the most awards (868), followed by Kenya (662), Ghana (535), South Africa (484), Egypt (480) and Uganda (445).

Kenya, Nigeria and South Africa have been identified as sites for Africa regional hubs (bringing together teams from DFID, SIN and DCMS), which will support the UK Governments partnerships with Africa.

For all countries, Commonwealth and Chevening scholarships generally dominated, with a few exceptions, namely DELTAS in Kenya and Uganda and Newton PhD programme and Chevening scholarships in Egypt. For example, support for Nigerian fellows and scholars has been primarily through Commonwealth scholarships (62.7%) followed by Chevening (22.5%).

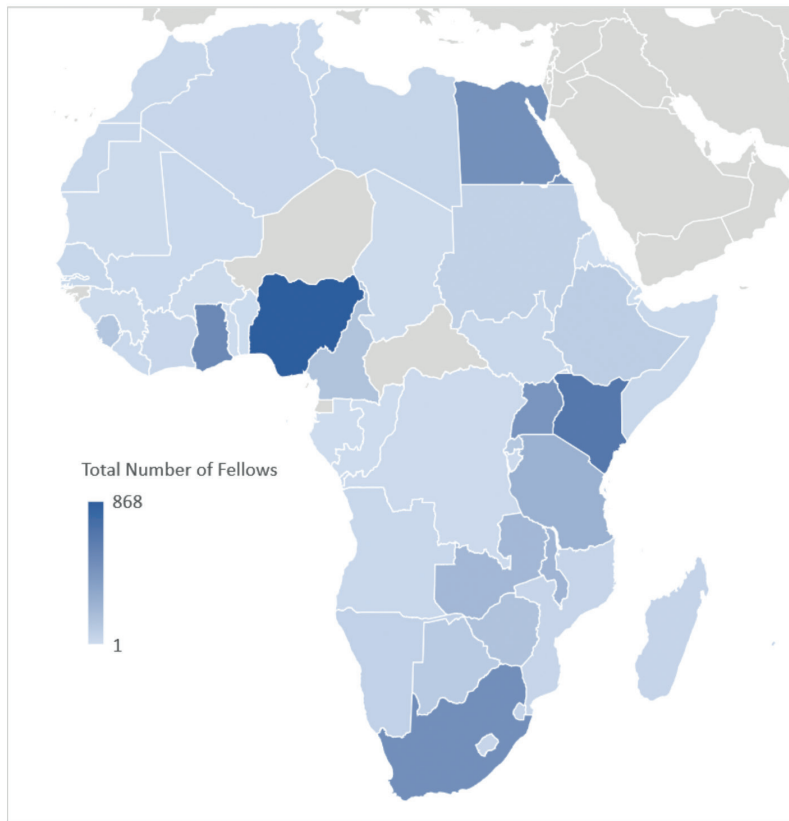
Countries with the fewest numbers of active fellowships and scholarships are Comoros, Eritrea, and Republic of Congo, each with only one fellow over the last five years. No support has been provided in Niger (West Africa) and Central African Republic (Central Africa) and Seychelles (removed from the ODA DAC list³⁵ in 2018) is the only non-ODA country in Africa supported with 22 fellows over the last five years.

Detailed figures for each country are found in Table 1.8 in the Annex, along with a breakdown by scheme in Figure 1.1 and by type of award in Figure 1.2.

34 Nationality data was provided for 3,525 fellows/scholars (62.6%) and country of base was provided for 2,108 fellows/scholars (37.4%). If both nationality and country of base were given, we only included those with African nationality. Those with non-African nationality but based in Africa at the time were excluded. For fellows/scholars where we received country only information we only included those based in Africa. In terms of data limitations, if country information only was received, fellows and scholars from the diaspora based internationally may have been omitted from the dataset because no nationality data was provided to determine their inclusion.

35 [ODA DAC list](#)

Figure 3: Number of fellows and scholars supported in Africa by nationality or country of base (2014-19)



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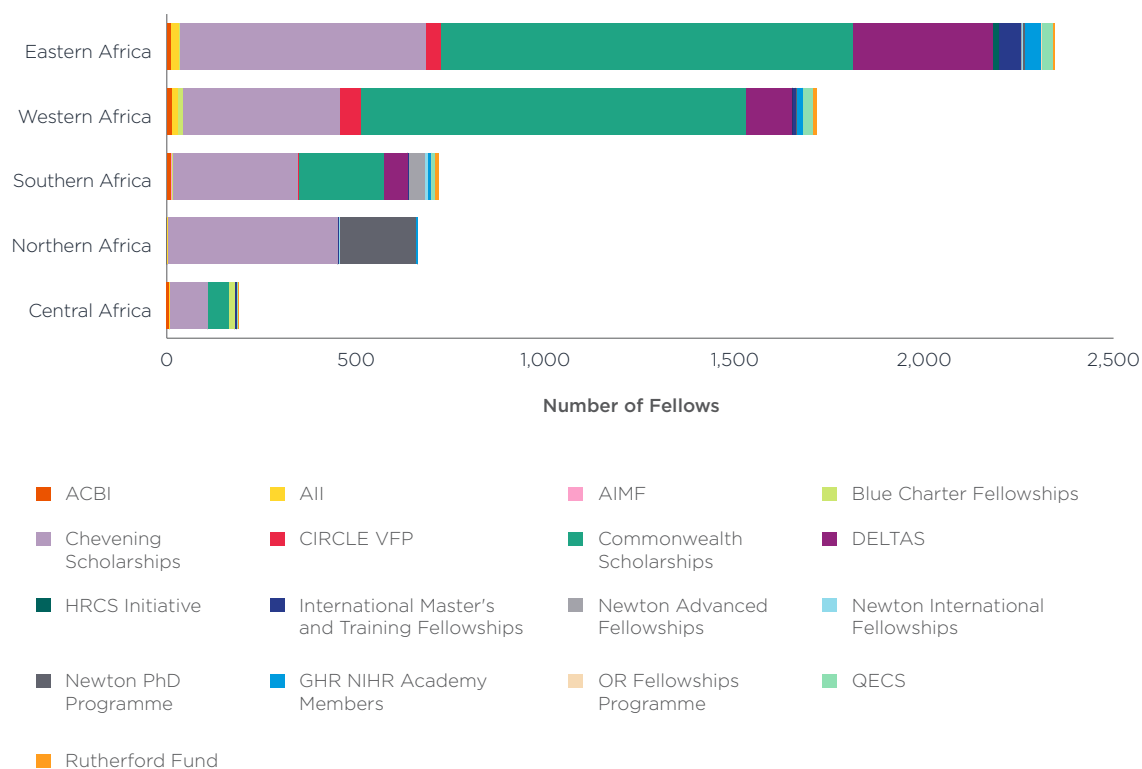
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Support to countries was clustered by region for Northern, Western, Central, East and Southern Africa³⁶. The regional distribution of UK-funded schemes across Africa is presented in Figure 4. There is a clear clustering of awards in West and East Africa, then Southern and Northern Africa, and significantly fewer awards in Central Africa. Chevening awards are more broadly distributed across regions than those of Commonwealth and other schemes.

Some schemes provided data on UK nationals who undertook fellowships in African institutions, however we did not request this data and it may therefore be incomplete, so this has been excluded from the analysis. Inward mobility however was mentioned as a key approach by QECS to strengthen capacity in African institutions.

³⁶ Support to countries was clustered by region using the [United Nations Statistics Division \(UNSD\) categorisation](#) for Northern, Western, Central, East and Southern Africa (see geographic regions tab).

Figure 4: Regional distribution of UK-funded fellowship and scholarship schemes (2014-19)

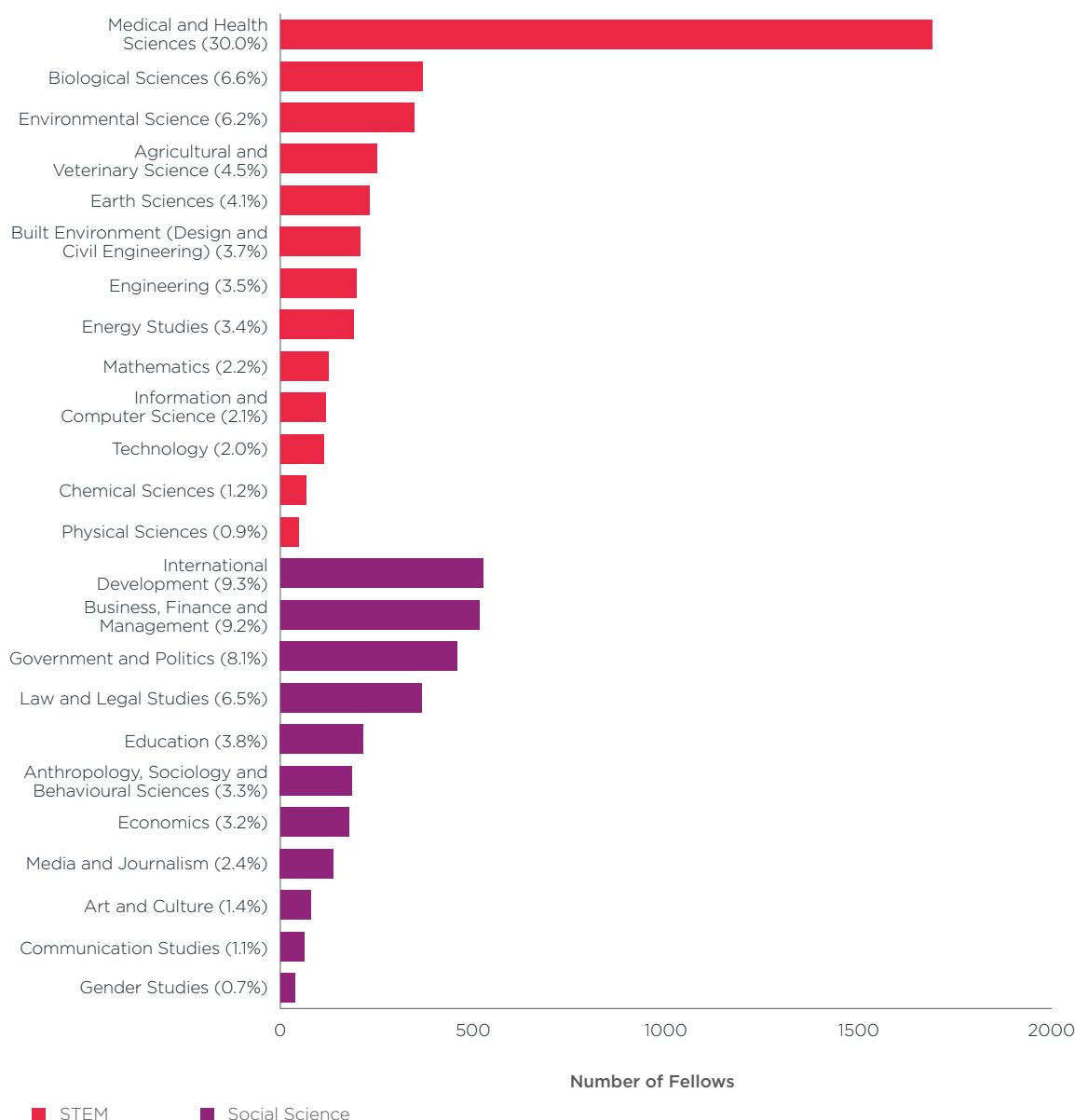


4.6 What is the thematic focus of the fellowships?

The research areas studied by fellows and scholars are shown in Figure 5. Each fellowship and scholarship was classified by 1-3 themes³⁷, meaning that some are counted multiple times where they cover more than one theme. Most fellowships and scholarships were in medical and health sciences (30%). This is unsurprising given that nearly half of the UK schemes and some of the main funders are health-focused. This was followed by International Development (9.3%), Business, Finance & Management (9.2%), Government & Politics (8.1%) and Biological Sciences (6.6%). Gender studies (0.7%) and Physical sciences (0.9%) were the least supported. Overall, more awards focused on Science, Technology, Engineering, and Mathematics (STEM) subjects (3,952 awards, 70.2%) than social sciences (2,762 awards, 49.0%).

³⁷ Each fellowship/scholarship was assigned up to three thematic areas of focus based on the title of the degree, the name of the research project, or funder-specific classifications. The categorisation of the thematic focus of each fellowship/scholarship used by UKCDR is based on the system used by the Australian and New Zealand Standard Research Classification (ANZSRC). The ANZSRC was considered by UKCDR as the most detailed and wide-ranging system. The ANZSRC was also deemed more appropriate than using the SDGs as the fellowships/scholarships were not limited to those with an international development focus.

Figure 5: Thematic focus of UK-funded awards to African fellows and scholars (2014-19)



4.7 What is the gender balance of fellows and scholars supported?

Finally, the gender balance of fellows and scholars was examined. This is a subject of concern for many schemes. Table 5 and Figures 6 and 7 shows the gender balance according to scheme, type of and subject of study³⁸. Across all schemes, 43.3% of awards went to African women and 55% to men. Schemes that got particularly close to gender parity include CIRCLE, Chevening Scholarships and DELTAS.

Figure 6 shows that funded Master’s and Early Career fellowships and scholarships are achieving better gender distribution than PhD and postdoctoral studies. The greatest differences are found in the representation of women in different areas of study (see

³⁸ Analysis of gender balance by country could not be done accurately as DELTAS provided aggregated data on nationality. Therefore, totals do not add up

Figure 7). Subjects with particularly poor gender parity included chemical sciences and engineering; while those with good gender parity included anthropology, sociology and behavioural sciences and communication studies. Gender studies was predominantly studied by female fellows and scholars. Overall, there was more equal gender distribution in social science subjects (Female 49.1%, Male 50.6%, Not specified 0.3%) than in STEM subjects (Female 38.6%, Male 55.8%, Not specified 5.6%).

Table 5: Gender balance by fellowship and scholarship scheme (2014-19)

Scheme Name	Female (%)	Male (%)	Unspecified (%)	Total Number of Fellows
Rutherford Fund	18.5	44.4	37.0	27
Blue Charter Fellowships	43.8	56.3	-	16
Newton International Fellowships	42.9	50.0	7.1	14
Newton Advanced Fellowships	43.5	41.3	15.2	46
Newton PhD Programme	42.9	57.1	-	210
BEIS Total	40.8	53.4	5.8	313
ACBI	35.0	65.0	-	39
CIRCLE VFP	50.5	49.5	-	97
Commonwealth Scholarships	42.4	57.6	-	2385
OR Fellowships Programme	-	100.0	-	2
DFID Total	42.6	57.4	-	2,523
GHR NIHR Academy Members	-	-	100.0	72
DHSC Total	-	-	100.0	72
Chevening Scholarships	46.5	53.5	-	1,946
QECS	23.9	76.1	-	71
FCO Total	45.7	54.3	-	2,017
All	45.2	52.4	2.4	42
AIMF	25.0	75.0	-	4
DELTAS	47.4	52.3	0.3	574
HRCS Initiative	37.5	62.5	-	16
International Master's and Training Fellowships	25.0	75.0	-	72
Wellcome Total	44.6	54.9	0.4	708
Grand Total	43.3	55.0	1.6	5,633

Totals may not add up due to rounding.

Figure 6: Gender balance by type/level of fellowship or scholarship (2014-19)³⁹

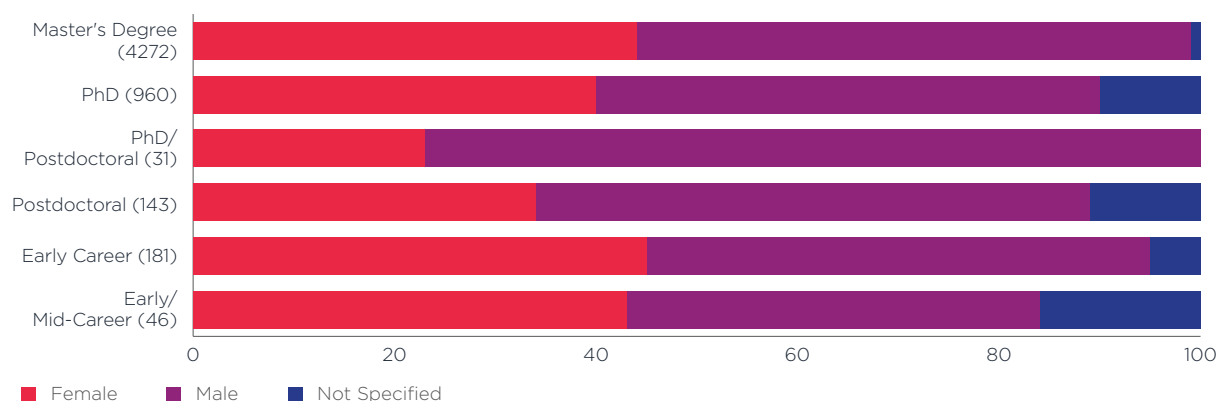
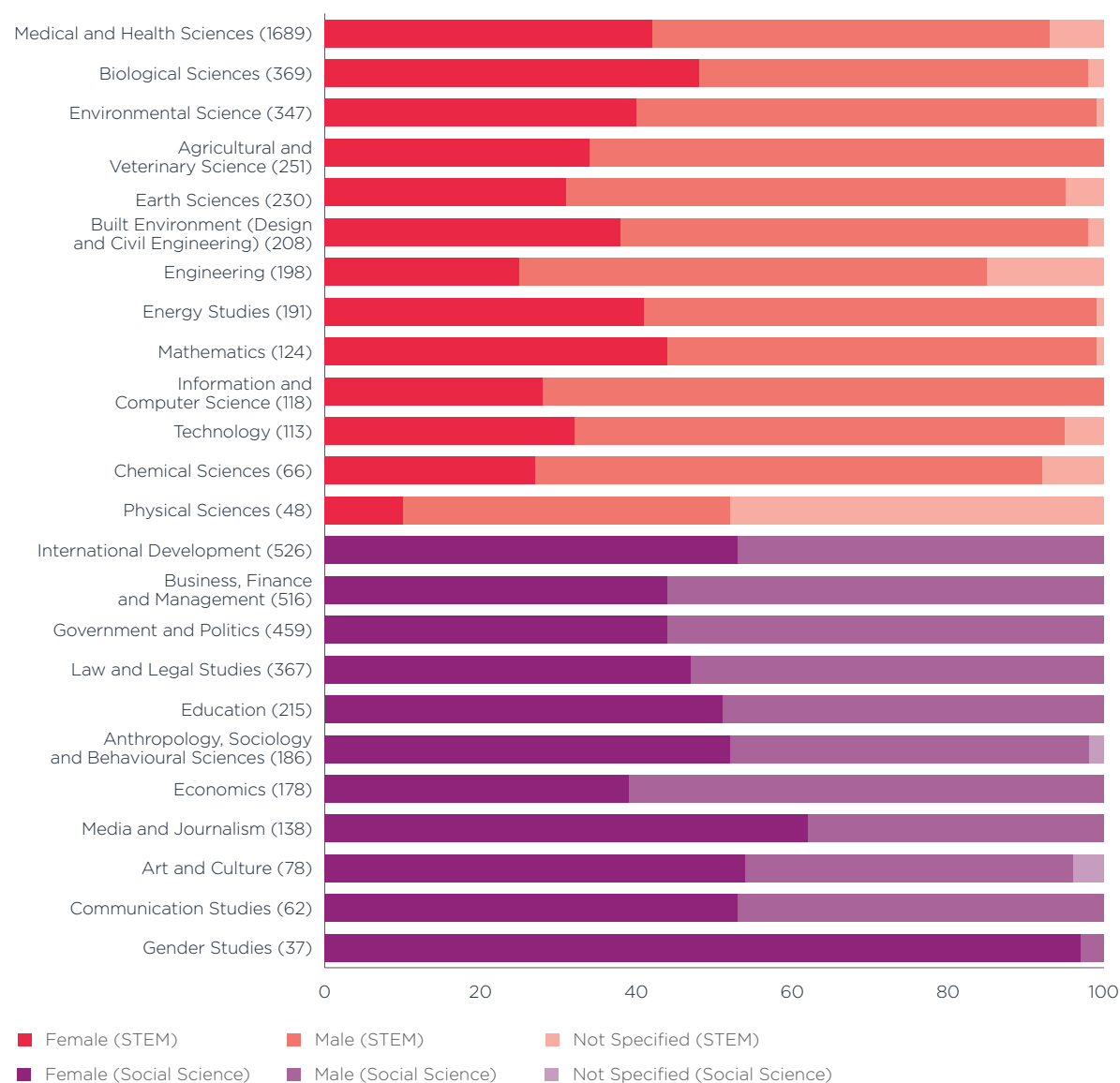


Figure 7: Gender balance by subject of study (2014-19)



See Table 1.9 in the Annex for a numerical breakdown of gender balance by subject area.

³⁹ Overall gender balance figures are slightly different to Table 5 as All only provided aggregated data for gender for their scheme but not by type of fellowship. This figure includes combined categories of PhD/Postdoctoral and early/mid-career as Wellcome International Training Fellowships and Newton Advanced Fellowships schemes respectively, can be used to obtain either. Implementing partners were unable to distinguish type/level of award for each fellow in these schemes.

5. Learning across UK-funded fellowship and scholarship schemes

Implementing partners and administrators of UK-funded fellowship and scholarship schemes kindly provided considerable information on their procedures which we have collated for further reference and analysis. In this report, we use just a selection of the most relevant learnings across schemes on:

- a) models/approaches
- b) selection processes
- c) evaluation
- d) impact

Learning from FLAIR is also included in this section. As mentioned in section 1.3, survey responses submitted by the schemes varied in depth and detail and therefore, this summary should be taken as indicative, as comparisons between schemes has not been attempted.

5.1 Models and approaches used by UK-funded fellowship and scholarship schemes

All schemes are directed at individual capacity building, supporting skills building, career development and leadership for African fellows and scholars. The UK funded 17 schemes, 10 discrete where the primary focus was on fellowships and scholarships, and nine embedded sitting within broader research or RCS programmes. Some like DELTAS and All aimed for research and RCS to be equal components. [See Table 1.1 in the Annex for an overview of schemes.]

Embedded schemes differed in how they were linked to broader capacity strengthening activities. Four of the eight embedded schemes had additional institutional research capacity strengthening elements (CIRCLE, ACBI, DELTAS, All). For example, CIRCLE has a dual approach of supporting individual academics to undertake research and training while also working with their institutions to develop better professional development systems for their early career researchers through an Institutional Strengthening Programme (ISP). The ISP was managed by the ACU in partnership with Vitae and drew on the Researcher Development Framework and the UK Concordat to Support the Career Development of Researchers⁴⁰. DELTAS has integrated individual development with institutional change through research management, financial and administrative capacity strengthening and building a sustainable hub infrastructure.

For some schemes, like ACBI and GHR NIHR Academy Members, which work across a consortium of institutions, the consortium decides how to deploy its fellowships and

⁴⁰ Vitae, [About the Vitae Researcher Development Framework](#)

scholarships. With the DELTAS hub and spoke consortium model, hubs in Africa become the implementing partner for the consortium's fellowships and scholarship scheme. The DELTAS consortia structure also drives greater intra African collaboration.

Just under 3% of UK support went to split-site fellowships (151) where one site is the individual's home institution and the second is in the UK or another country. CSC Commonwealth Distance Learning Scholarships for Master's study the only scheme that offers distance study for African students.

5.2 How are schemes informed by national and institutional needs?

Fellowship and scholarship schemes provided by the UK are influenced by the needs of both the UK and the countries partnered with. The UK needs may also reflect those of the scheme's Government funder. For instance, CSC is focused on supporting UK aid policy and the UK's obligations under the Commonwealth Scholarship and Fellowship Plan, while Chevening is focused on UK foreign policy around improving diplomacy, strengthening relationships with the UK and promoting UK higher education. The many benefits to the UK associated with fellowship and scholarship schemes have been identified elsewhere⁴¹, and in this section, we focus on how schemes engage with the national and institutional needs of their African partners and participants.

Several schemes identify how African institutions inform their development and execution. This is particularly significant for schemes embedded in African research capacity building partnerships, while most UK-led schemes also respond to specific African needs. Commonwealth Scholarships, for instance, consider applicants who have already been pre-selected by African government committees or universities, for training in nationally important areas. Similarly, UK diplomatic missions use their deep understanding of specific national needs and issues to identify and select potential Chevening scholarship applicants.

Africa-focused and led schemes, such as FLAIR, are delivered in the context of the African Union Agenda 2063⁴², and the Science, Technology and Innovation Strategy for Africa 2024⁴³ that places science, technology and innovation at the heart of the continent's socio-economic development. Several UK-funded schemes benefit from being part of the AAS's wider agenda-setting and programme management platform, the Alliance for Accelerating Excellence in Science in Africa (AESA). AESA provides a broader focus on promoting an enabling research environment, championing the growth of postdoctoral and research cultures within institutions and strengthening the capacity of research support and management functions.

Fellowships in South Africa under the Newton Fund are informed by UK delivery partners partnership with the NRF in South Africa and aims to meet the national need to accelerate excellence of emerging South African researchers, and address the decline in leading young academics. OR Fellowship Programme research studies are designed based on the needs of the national disease control programmes to support evidence-based decision making.

41 Wilton Park (2016) [International scholarships: the case for investment, and how to ensure impact. Report on a Workshop](#), 21-22 March 2016.

42 [African Union Agenda 2063](#).

43 [Science, Technology and Innovation Strategy for Africa 2024](#).

5.3 How do schemes support fellows during their fellowships and scholarships?

Besides providing the funding to support fellows and scholars in their degree programmes, training or research, some schemes make other specific investments, particularly at PhD/postdoctoral/early career level. Mentoring by international experts and research visits abroad are often provided by Africa-based training schemes. CIRCLE, FLAIR and other schemes provide courses in career related skills and research leadership. The Consortium for Advanced Research Training in Africa (CARTA), part of the DELTAS initiative, is devoted to improving research and career skills of PhD candidates in participating African institutions. Fellows and scholars in African institutions face conflicts between time for research and other duties, and some schemes, including FLAIR and Newton International Fellowships, secure protected time for independent research and training by limiting teaching and administrative responsibilities.

[See Table 1.2 in Annex on support during UK-funded fellowship schemes.]

5.4 How do schemes support fellows after their fellowships and scholarships?

Most schemes support former fellows and scholars through alumni networks and encourage networking amongst scholars and with institutions where they trained. Occasional post-award opportunities are available to support career development and promote research impact. There is a definite effort to maintain links with UK host or partner institutions.

Chevening and CSC have the largest networks of Alumni funded by the UK Government. Chevening has built a global network of 50,000 Chevening alumni who act as global ambassadors for the UK. The Chevening Alumni Programme Fund (CAPF) also gives alumni access to funding to organise alumni activities and projects designed to enhance Chevening engagement, influence, and social impact. CSC have an alumni network of 27,500 Commonwealth scholars and fellows built up since 1959, including highly influential and notable figures. Through this network, alumni can build contacts with a diverse range of scholars across the Commonwealth, join an in-country alumni association and attend in-country events, join the CSC Alumni Advisory Panel to contribute to the development of CSC activities and access the CSC's nine Knowledge Hubs on sustainable development.

The Royal Society currently has c.340 Newton International Fellows in its network and provides opportunity for up to £6,000 follow-on funding per annum for fellows to maintain links and long-term relations with UK-based researchers. QECS are currently working on developing an alumni network and Rutherford has also identified this as a future priority. For DELTAS, the AAS has developed a mentorship scheme which extends after the fellowship. The AAS also has plans to establish a DELTAS Africa Alumni Network, and encourages fellows to access schemes for postdoctoral opportunities and continued professional development with AAS Fellows and Affiliates.

Blue Charter has a LinkedIn group for all ACU Blue Charter Fellows to allow them to network and share opportunities and information. They also provide online training and grants for knowledge exchange/research impact activities. All OR fellows are part of the 'OR Network', a web-based platform for operational research enthusiasts managed by the Centre for Operational Research, The Union. CIRCLE provide opportunities to apply for publication funding and research uptake funding after completion of their fellowships. In addition, alumni can also remain engaged through the ISP within their home institution (if applicable). NIHR are providing small grants and knowledge exchange activities to support GHR NIHR Academy Members. International Master's and Training Fellows, if

linked to Wellcome's Africa and Asia programmes, also have a local network of support and are embedded in strong research infrastructure.

5.5 Do UK-funded fellowship and scholarship schemes work with other schemes in the UK or internationally to deliver their programme?

While the majority of UK-funded fellowship and scholarship schemes reported no formal working relationships with other fellowship schemes in the UK or internationally on programme delivery⁴⁴, there was evidence of sharing learning and best practice, and of facilitating networking across programmes. DELTAS and AIMF link with other Wellcome-funded programmes and fellows shared learning at conferences, including DELTAS conference 2019, and DELTAS Africa fellows attend the India Alliance annual Fellows Conference and vice versa. FLAIR fellows get the opportunity to network, train and collaborate with other Royal Society and AAS supported early career fellows and the Newton International Fellowship scheme benefits from being part of a wider focus on early career researchers at The Royal Society and other UK National Academies. ACU, which administers CSC scholarships, Chevening Scholarships, Blue Charter fellowships, QECS and the CIRCLE scheme, provides a platform for sharing learning and practice, and strong links to other international capacity building initiatives. For example, QECS, CSC and the Chevening Secretariat collaborate in sharing best practice on monitoring and evaluation, alumni, and scholarships management best practices. ACBI and DELTAS benefit from and contribute to cross-learning through the Centre for Capacity Research (CCR) at the Liverpool School of Tropical Medicine (LSTM) involvement in research and monitoring & evaluation (M&E) for both programmes.

There is a clear opportunity for a dialogue between schemes that support different stages in research career development. The Royal Society commented that FLAIR application calls were shared with CSC to disseminate to CSC scholars/fellows and alumni, and they are discussing how the programme complements other schemes, for example the ACBI and African fellowship and scholarship schemes led by UK universities.

5.6 What selection processes do UK-funded fellowship and scholarship schemes use?

Most schemes have competitive selection processes ranging from two to four stages. These may be administered by the schemes themselves or by universities hosting the fellowship or scholarship. For PhDs, university acceptance must usually be secured before applications are considered by schemes. See Table 1.3 in the Annex for further detail on selection processes for each scheme.

Candidate selection is merit-based and scoring panels often use standard criteria for selection. Criteria vary but the following are particularly common:

- Academic excellence and (for higher levels) evidence of scientific achievement
- Strong interpersonal skills and leadership potential
- Quality and relevance of proposed research or course of study

⁴⁴ Apart from the UK National Academies who work together formally on the Newton International Fellowship and Newton Advanced Fellowship schemes.

- Motivation of candidate to pursue a research or other career in their own country
- A clear commitment to achieving development impact
- Evidence that fellowship or scholarship would not be possible without funding
- Capacity to contribute to international networks and UK-Africa partnerships.

Many schemes have a stated commitment to equity and inclusivity, and most report a commitment to achieving gender parity in awards. Positive action in this regard takes several forms. CSC now requests a personal statement where applicants can give more information about their backgrounds. Several fellowships and scholarships have a target of gender parity, which may be applied in selecting between candidates with equal qualifications but different genders. FLAIR and Royal Society Newton International fellowships may be taken as full- or part-time positions to accommodate caring responsibilities. These fellowships also provide provision for maternity, paternity, adoptive or extended sick leave, and a childcare travel policy.

A continuing gap remains when considering individuals from disadvantaged backgrounds. This has always been a challenge for international fellowship and scholarships schemes because disadvantaged individuals may not have had the educational opportunities to allow them to compete strongly with other candidates. The Ford Foundation has had a longstanding commitment and considerable success in developing schemes for disadvantaged groups as a benchmark⁴⁵, and other examples include Makerere/Uganda Virus Research Institute Infection and Immunity (MUII Plus), one of the DELTAS programmes, which has a specific programme/call for people with disabilities to undertake scientific research, and university-based programmes supported by the Mastercard Foundation⁴⁶ and the Windle International Trust (see section 6 Experience from other UK and International Schemes).

5.7 Success rates (applications vs awards)

Average success rates provided per scheme varied between 0.6 – 44% suggesting demand far beyond supply of some schemes. For example, in some of the DELTAS programmes, there were cases where over 3,000 applicants competed for approximately 20 fellowship opportunities. In 2019/20 Chevening received 48,000 eligible applications (globally) for approximately 1,700 awards and the Royal Society received an average of 700 applications for Newton International fellowships per round with an 11% success rate.

5.8 How do UK-funded fellowship and scholarship schemes evaluate impact?

All scholarship and fellowship schemes are committed to evaluation to understand and measure their impact on stakeholder groups, assess the return on investment and progress against objectives, consider future approaches, improvements and funding for their programmes and inform ongoing programme development.

Several organisations surveyed indicated that they schedule formal programmatic reviews at regular intervals. The quinquennial Royal Society Evaluation Framework is used by the Royal Society to evaluate their FLAIR and Newton International and

45 Musa-Oito, E.A. 2018 Selecting Social Change Leaders. In Dassin et al. (2018), pp.87-104.

46 Burciul, B. and K Kerr 2018 Case Study: Education in Support of Social Transformation—The Mastercard Foundation Scholars Program in Dassin et al. (2018), pp.329-344.

Advanced Fellowships schemes, while the Wellcome's International Master's and Training Fellowships have a five yearly internal formal review of schemes.

Beyond whole scheme reviews, all schemes surveyed have established continuous procedures to monitor the progress of cohorts of scholars and fellows as a means of evaluating their impact. These include routine measures of scheme completion, return to home country and scholar satisfaction, and often measures of skill and career development that may contribute to future impact of scholars. Methods for measuring potential impact differ, and many are still in development, as most schemes surveyed are quite new and are only beginning to graduate cohorts of scholars. New research is contributing to methods development. For example, the CCR at LSTM and the African Population and Health Research Centre (APHRC) have recently produced for DFID a framework for evaluating capacity strengthening programmes, including fellowships and scholarships.⁴⁷ Long-running schemes, such as the Commonwealth and Chevening Scholarships, have developed a portfolio of evaluation tools that benefit from decades of cohort data and evaluation experience. They provide several valuable potential approaches for exploration by newer schemes, along with a range of innovative fellowship and scholarship evaluations schemes led by other countries.⁴⁸

In the past decade, international approaches to evaluating aid-supported fellowship and scholarship schemes have advanced substantially. New programmes often develop a Theory of Change⁴⁹ at the outset (e.g. FLAIR and ACBI schemes), to identify outputs, outcomes and pathways to impact. Scholars with enhanced capacity, who contribute to outcomes such as technical innovation and positive change in institutions and national policies. This in turn may generate societal impacts such as improved personal well-being, economic growth and contributions towards achieving SDGs. These pathways reflect more general models for the impact of higher education in LMICs but may focus particularly on a scholar's capacity to effect institutional and social change either as individual change agents, or through networks they have joined.⁵⁰ The Theory of Change is then used to identify appropriate indicators for measuring impact.

All UK schemes have a principle component of individual capacity building, for which they use indicators of a scholar's career progress as a measure of potential impact. For PhD, postdoctoral and early career training, specific quantitative indicators are used to measure research achievements and career advancement. For example, CIRCLE, All and OR Fellowships Programme record fellows' publications, conference participation, collaborations, grant proposals and awards as measures of impact.

Schemes also seek to measure, by more qualitative means, the contribution of scholars' to other development-relevant outcomes. These may be generated through scientific research careers, but note that all Chevening, and many Commonwealth Scholars, complete Master's degrees and develop careers as well in other sectors including government, civil society and business.

Effective measurement of outcomes and impacts of scholarships and fellowships is a long-term deliverable. Many UK schemes surveyed are too young to have set up a programme of continuing, post-scholarship assessment. However, Wellcome

47 Khisa, A M., Citau, E., Pulford J., Bates I. (2019), [A Framework and Indicators to Improve Research Capacity Strengthening Evaluation Practice](#) (APHRC, LSTM Centre for Capacity Research).

48 DAAD Concept (2018), [Managing for results](#): Monitoring concept for higher education programmes funded by the Federal Ministry for Economic Cooperation and Development (BMZ) (DAAD); Raetzell, L., Almqvist O., Lammers, F., Krämer, M., Franke, J. (2018), [Impact Evaluation of the Belgian University Development Cooperation](#): Lessons on the Evaluability of Institutional Partnerships and Scholarships (Syspons GmbH, NUFFIC, Special Evaluation Office of the Belgian Development Cooperation); NUFFIC, [Monitoring & Evaluation Framework](#): Orange Knowledge Programme.

49 Khisa et al. (2019), [A Framework and Indicators to Improve Research Capacity Strengthening Evaluation Practice](#). NUFFIC, [Summary of Theory of Change](#): Orange Knowledge Programme.

50 Oketch, M., McCowan, T., Schendel, R., Bangpan, M., Terano M., Martson, A., Rawal, S. (2014), Education Rigorous Literature Review: The Impact of Tertiary Education on Development (Institute of Education, University of London, DFID); Dassin et al., (2018).

and AAS have a comprehensive career tracker in place. Long-running schemes, like Commonwealth and Chevening, survey their scholars at regular intervals post-award on their experiences, the use of the skills and knowledge gained on award as well as the perceived impact in the survey period. With Chevening, diplomatic posts play an important role in this assessment. CSC conducts regular surveys but is now expanding this to systematically collect qualitative evidence from alumni and other stakeholders. Following extensive experimentation, CSC has developed a “longitudinal approach” that begins with a pre-award baseline survey and continues after the award with five surveys at two-year intervals.⁵¹

Several schemes have both individual *and* institutional capacity building objectives, including DELTAS, AII, CIRCLE and ACBI, and these have developed indicators for measuring improvement in research environments in participating African institutions.

Evaluations of scholarship and fellowship schemes face considerable challenges of attribution.⁵² Motivated graduates are likely to make significant career advances and contributions without awards, so a key consideration is how we can measure the specific contribution of the award to development of skills and eventual impact. A relatively easy approach that several UK schemes do is to measure the contribution of the award itself is to gather baseline data on scholars, which can be compared to capacity at the end of their study. A second, more challenging approach, is to invest in establishing a counterfactual, by creating cohorts of similar qualified individuals who did not receive an award and comparing their progress to that of award-holders. CSC and CIRCLE schemes have both used counterfactual methods to evaluate impact of their schemes.

In summary, the UK schemes surveyed report a range of evaluation approaches, including ones that reflect the most current and innovative international methods. Longstanding UK schemes have valuable evaluation expertise and capacity, making progress in monitoring and measurement of outputs and outcomes, including tracking over long time periods. However, there has been less progress on robust impact assessment. As schemes move beyond measuring outputs to evaluating outcomes and impacts, UK schemes have a growing range of international methods and metrics available. Sharing of methods between schemes may contribute to overall improvement of evaluation approaches for UK scholarships and fellowships.

5.9 Do fellows return to research careers in their country or pursue careers elsewhere/back in the UK?

As described earlier, most schemes plan to assess the career path of their scholars and fellows, but in many cases, results are not available because the scheme itself is at an early stage, with few graduates, or currently in the process of data collection for evaluation. This is true, for instance, of Rutherford, Newton International and Advanced fellowships and QECS schemes. Some longer-running schemes have established career-tracking tools, like those of Wellcome and AAS, while CSC’s longitudinal approach surveys its alumni at regular intervals, beginning two years after completion.

For fellows training in the UK, return rates of scholars and fellows to their home countries has always been an issue because of concern that graduating scholars may seek to remain in countries where employment opportunities and benefits are greater than at home, particularly for research careers. To counteract this “brain-drain” long-running schemes like Commonwealth and Chevening scholarships have made it a condition

51 Mawer, M., Quraishi, S., Day, R. (2017), [Tracking international scholarship outcomes: the CSC Longitudinal Research Framework](#) (The Association of Commonwealth Universities).

52 Mawer, M. (2018), Magnitudes of Impact: A Three-Level Review of Evidence from Scholarship Evaluation, in Dassin et al., pp. 257-281.

of award that graduates return to their home countries. For Commonwealth Scholars, evaluation survey data from 2015-2019 shows that over 77% were based in their home countries two years post-award, with two thirds of the remainder reporting that they were undertaking further study. Return rates between 70-100% are typical of discrete fellowship and scholarship schemes offered in other countries, including Belgium, Germany and the Netherlands.⁵³ Fellows and scholars sponsored by development oriented schemes are generally far more likely to return to home countries than those who are self-funded or supported to study abroad by their own governments.⁵⁴ In recent years, discussion around scholar destinations and “brain drain” has become more nuanced. Graduates remaining abroad may still contribute to “brain circulation” and home country development through their work and the international networks they build. Engagement of the African diaspora has also become more substantial.⁵⁵

Schemes which support fellowships and scholarships in African institutions, such as ACBI, FLAIR, DELTAS, Newton Advanced Fellowships and OR Fellowships Programme, may be expected to improve retention of scholars in Africa, relative to overseas placements. However, reports of post-award mobility for African-based scholars and fellows are so far limited. AAS reports that all fellows trained in the region have remained, and none have emigrated following training. The first ACBI PhD graduates have also remained in academic roles in their home countries. Notably, DELTAS and FLAIR also report that their schemes have been able to attract fellows from the diaspora back to the continent.

Longer-running schemes provide detail on the careers of scholars and fellows after their return. Those returning from the UK will often continue with previous employers, such as universities. However, some pursue other careers, and this will be particularly the case for Master’s degree holders. Recent data for Commonwealth PhD and Master’s scholarships shows that 62% reported academic research being one of their main responsibilities in employment or study (n=1588); and of those, 61% were working in the academic sector, 19% in the public sector and 10% in the non-governmental sector. The remainder worked in the private sector, for multilateral organisations or did not specify.

5.10 What is the evidence of impact of UK-funded fellowship and scholarship schemes?

Quantitative information was provided on the outputs, outcomes and impacts of some schemes, for which we provide an indicative sample. In addition, we received many case studies for individual scholars and fellows. Case studies are a widely used and valued tool for understanding impact of international programmes. Most statistics focus on outcomes, e.g. career advancement and contributions to institutional capacity building and policy. Evidence of impact on development goals is less common, reflecting in part the relatively short time scales of evaluation in many of these schemes.

53 Raetzell, L. et al. (2018), [Impact Evaluation of the Belgian University Development Cooperation](#) (Syspons GmbH, NUFFIC, Special Evaluation Office of the Belgian Development Cooperation).

54 Marsh, R R., Oyelere, R U. (2018), Global Migration of Talent: Drain, Gain, and Transnational Impacts, in Dassin et al. (2018), pp. 209-234.

55 Ibid., pp. 209-234.

Measuring individual scientific achievements

Several PhD, postdoctoral and early career schemes measure scientific career development. Research publications and projects are used as one measure:

- Between January 2009 - June 2019, five OR fellows in Africa were named as co-investigators 437 times in research projects, and named 257 times as co-authors in the articles published in national and international journals.
- 48/74 (65%) CIRCLE respondents had submitted a total of 128 peer-reviewed journal articles since January 2018. Of those, 34 had a total of 51 articles successfully published.
- 494 publications through All were attributed to Wellcome funding with a median relative citation ratio of 1.17.
- Preliminary data from DELTAS from its 2018 reporting period shows that fellows are publishing in high impact journals (349 out of 440 publications were in peer reviewed journal articles).

Evidence of maintaining or building international research collaborations is also measured:

- Feedback on the Rutherford scheme shows contacts have been made and provided opportunity to work collaboratively with others.
- 84% of CIRCLE's Cohort 1 reported they were still in contact or actively collaborating with their host supervisors since January 2018.
- 40 (54%) of CIRCLE respondents had been involved in 74 grant/funding applications since January 2018.
- Data from DELTAS 2018 reporting period show that 29 new research collaborations/partnerships were established across all DELTAS Africa grantees.

Personal career advancement is also used as a measure:

- 19/74 (26%) CIRCLE fellows reported that they had been promoted in the last 12 months (e.g. to senior lecturer, associate researcher) with 12 of these indicating that this promotion was influenced by their participation and publication through CIRCLE.
- DELTAS fellows are already occupying leadership positions at their institutions as Heads of Departments, Programme Directors and Deans of Faculties, leading research groups as independent researchers; and being appointed on national and international health and other scientific committees e.g. National Presidential Committees on Health and World Health Organisation (WHO) related committees.

Measuring institutional capacity development

Evidence was also gathered on contributions of schemes to institutional capacity building. Some of this is related to the activities of scholars who contribute to change and innovation within their universities, and some comes from separate, institution-focused activities in these schemes:

- ACBI consortia have reported impacts on departmental and institutional decision-making and policies in their host institutions, such as developing a roadmap for students pursuing post-graduate degrees through research.

- RAND's four-year evaluation of AII⁵⁶ showed that the programme had made a significant contribution to health research related PhD and Master's provision in Africa and the emergence of popular new models of provision.
- DELTAS has positively influenced change in the domain of research management and administration in their lead institutions.
- CIRCLE has helped its participating institutions to implement improved formal mentoring mechanisms, and activities to support early career researchers.

Measuring societal impact

A number of schemes provided information on impacts on national and international policies and practice.

- DELTAS research has led to changes in several policies at the global level, e.g. revised WHO guidelines for rabies and HIV management.
- The Union reports that of 41 OR research projects assessed for impact to 2018, 18 (44%) had led to some change in policy and/or practice.
- 74% of FCO Embassies or High Commissions where Chevening operates have used Chevening alumni to support their work on governance, democracy and human rights issues.

Through its survey of scholars from cohorts over 50 years, CSC has been able to measure the diversity and nature of societal impacts made by scholars in different sectors:

- 78% of scholars from Africa surveyed in CSC's 2016-2018 collated dataset reported having an effect on social development, 58% on economic development, 56% on civic engagement and 63% on policymaking.
- The same alumni were asked about whether they had been able to influence change at various levels: 88% reported having an impact at an institutional level, 85% at a local level, 53% at national level and 33% at an international level.

56 [Evaluating the Wellcome Trust's African Institutions Initiative](#)

6 Experience from other UK and international schemes

In this section we analyse a sample of other scholarship and fellowships schemes for Africa including other UK schemes at the university level and those provided by other countries and international organisations.

6.1 UK university- and trust-based schemes

Many UK universities provide fellowship and scholarship schemes for students from LMICs, often with the support of external foundations and trusts. Given the limited time available for this mapping we have selected seven of these to illustrate the nature and diversity of university schemes directed at Africa (Table 6).

Table 6: Features of selected fellowship and scholarship schemes led by UK universities, trusts and foundations

Scheme	Host Institution	Type of Scheme	External Funding	Numbers of Awards to African Candidates (Over Time Period)
Cambridge-Africa Programme: PhD Scholarships	University of Cambridge	PhD	University of Cambridge, Cambridge Trust, GCRF	25 (2014-19)
Cambridge-Africa Programme: CAPREx*	University of Cambridge	Postdoctoral (with specific African universities)	Carnegie Corporation, Isaac Newton Trust, ALBORADO Trust	67 (2012-19)
Global Challenges Centre for Doctoral Training*	Durham University	PhD	GCRF	6 (2019-ongoing)
Windle Trust International	Number of UK universities	Master's	Hugh Pilkington Charitable Trust	83 (2014-19)
Mastercard Foundation Scholars Programme	University of Edinburgh	Master's (33% by distance)	Mastercard Foundation	120 (2016-23)
Capacity Strengthening Research Degree (CSR D) Scholarship Scheme*	London School of Hygiene and Tropical Medicine	PhD (partial funding: UK component of)	GCRF	21 (2017)
Development Trust Africa Scholarships	Loughborough University	Master's (partial funding)	Ferguson Trust	20 (2014-19)

*Denotes Research England universities funded through GCRF.

University schemes are generally small - those in Table 6 for instance, provide an average of 5-20 grants per year. They may provide partial or complete support for study at the Master's, PhD or postdoctoral levels. Most schemes base selection largely on university procedures for admission to the degrees offered, but they may also apply other criteria related to development objectives. For instance, Windle Trust International provide scholarships exclusively for disadvantaged individuals from conflicted-affected communities in East Africa and the Horn of Africa. These are selected with the help of the Trust's Africa-based staff, favouring candidates with a strong academic record and a proven commitment to development. Selection for Edinburgh Mastercard Foundation Scholars places weight on demonstrated leadership potential, and leadership training is provided during the degree programme. This scheme also has a target of achieving 70% female scholars.

University schemes augment their own investment with a range of largely charitable funding sources and have made particularly imaginative use of GCRF Quality-related (QR) funding, notably at Durham University where they have established a new doctoral training centre. Approaches taken to evaluate the impact of university schemes are broadly similar, if less intensive, than those of the main schemes examined in this analysis.

Fellowships and scholarships represent only one aspect of UK university engagement with African capacity strengthening. Another major opportunity arises through university partnerships. Most international partnering by UK universities has been directed at Asia, but engagement with Africa is growing, and has been supported by a number of UK government programmes.⁵⁷ Partnerships may be linked to fellowships and scholarships, for instance, the Cambridge-Africa Programme's CAPREx scheme is specifically linked to Makerere University and the University of Ghana.

Universities have a key role in the delivery of UK fellowships and scholarships for Africa. In addition to their own schemes, they are of course the hosts of most of the fellows and scholars funded by the schemes examined in this analysis. All the institutions in Table 6 host Commonwealth and Chevening Scholars and many will contribute to African-based schemes. The Cambridge-Africa Trust, for instance, contributes to the DELTAS scheme by providing PhD advisors, delivering a remote training course for African-based fellows and hosting research visits by PhDs and postdoctorals through the scheme. Future planning of UK support for African fellowships and scholarships may therefore benefit from strong engagement with universities, not only as delivery partners of ODA supported schemes, but as innovators themselves in the design and implementation of schemes.

6.2 Non-UK fellowship and scholarship schemes

Like the UK, several countries have diverse portfolios of fellowship and scholarship schemes for Africa, supported by government departments as well as smaller university linked schemes supported by foundations. Recent efforts to draw together information (stimulated particularly by SDG 4b, to "substantially expand globally the number of scholarships available to developing countries").⁵⁸ However, efforts to quantify and compare fellowships and scholarships directed at Africa and other developing regions have encountered a profound lack of accessible and standardized data.⁵⁹ It is only possible, therefore to give a broad picture of current schemes across the globe.

National departments for international cooperation and/or education are the most

57 British Council (2015), Bridging the gap: Enabling effective UK-Africa University Partnerships.

58 Balfour, S. (2016) [SDG Target 4b: a global measure of scholarships](#) – Background paper prepared for the 2016 Global Education Monitoring Report *Education for people and planet: Creating sustainable futures for all* (UNESCO).

59 Institute of International Education (2016), [Scholarships for Students from Developing Countries: Establishing a Global Baseline](#) - Background paper prepared for the 2016 Global education monitoring report *Education for people and planet: creating sustainable futures for all* (UNESCO).

Harle, J (2013), [Doctoral education Africa: A review of doctoral student needs and existing initiatives to support doctoral training and research development](#) (DocLinks, Association of Commonwealth Universities).

common vector for fellowships and scholarships schemes for Africa. The ACU's recent survey brought together information on fellowship and scholarships schemes for Africa focused on doctoral training⁶⁰ and concluded that most bilateral funding, as in UK, is provided for Master's training rather than PhD training. Countries with established and well-documented doctoral schemes for Africa included France, Belgium, Germany, Austria, the Netherlands, Norway, Denmark, Sweden, Finland, Romania and Canada.

Discrete schemes which offer places for Master's and PhD study in universities in their countries are a common model. For example, in 2018, the Dutch Organization for Internationalization in Education (NUFFIC) offered 403 scholarships for Master's level study and 2,157 scholarships for short course study in the Netherlands to candidates in established careers in over 50 countries, including 25 African countries.⁶¹ Scholarships for postgraduate study in African institutions are significantly less common. Germany, for instance, does both.⁶² In 2017, the German Academic Exchange Service (DAAD) provided 304 Master's and 500 PhD scholarships to candidates from 17 African countries to study in German universities or in collaborating universities in Africa.⁶³

African countries provide discrete fellowships and scholarships schemes for citizens, and several African regional schemes support study in universities across Africa.⁶⁴ African governments do not generally provide individual scholarships for postgraduate study in high-income countries, as in middle-income countries like Brazil, India and China.⁶⁵

A range of embedded schemes involving capacity strengthening support to African institutions include fellowships and scholarship schemes. European experience in embedded schemes is more extensive than that in the UK. One of the most distinctive programmes has been Sweden's capacity building programme with African universities, led by the Swedish International Development Cooperation Agency (SIDA).⁶⁶ In response to the problem of African students returning from PhD training abroad to universities with little capacity to support research careers, SIDA undertook to help develop "research led" universities in Africa and other regions through sustained support to a small number of institutions. A programme of support to Makerere University, for instance, has been run for almost 20 years. Scholarship schemes in these selected universities undertake "sandwich" PhDs, spending part of their PhD training in Swedish universities.

A recent review of Belgian scholarship schemes in Africa provides an unusual opportunity to compare embedded schemes with more traditional discrete schemes. Both a discrete and embedded scheme were run in Benin. The discrete scheme involved Master's training in Belgium and was available to a wide range of applicants, while the embedded scheme involved partner universities in Benin and provided scholarships for staff there at the Master's and PhD level. The analysis concluded that the schemes were complementary in that recipients of embedded scholarships demonstrably strengthened educational and research capacities of partner universities. Recipients of scholarships from the discrete schemes often ended up working outside of academia, in government, civil society or business, and made demonstrable contributions there to

60 Ibid. (2013).

Harle, J. (2019) [Supporting doctoral education in Africa](#) – a sketch of what's available (The Association of Commonwealth Universities Blog).

61 Cooper, M (2019), [Annual report Orange Knowledge Programme 2018](#) / General overview (NUFFIC The Dutch organisation for internationalisation in education).

62 [DAAD In-Country/In-Region Programme in Developing Countries](#).

63 [DAAD 2017 Annual Report](#) (2018).

64 Harle, J. (2013), [Doctoral education in Africa](#).

65 Institute of International Education (2016) [Scholarships for Students from Developing Countries](#) (UNESCO).

British Council, DAAD (2014), [The rationale for sponsoring students to undertake international study](#): an assessment of national student mobility scholarship programmes

66 SIDA (2015), [Capacity building](#).

professionalising those institutions and improving their development impacts.⁶⁷

There are a growing number of embedded schemes in Africa which do not involve specific North-South university partnerships but rather establish a regional centre of excellence at an African institution, providing fellowship and scholarship schemes there for talented applicants from all over Africa:

- This model is very similar to elements of the DELTAS programme (to which Wellcome contributes).
- It has been the basis of the World Bank's African Centres of Excellence programme, now entering its third phase, which supports 23 African universities to develop and run regional research centres of excellence in a specific subject, and to provide Master's, PhD and early career support to outstanding candidates from across Africa, with investment from bilateral partners and research institutions overseas.⁶⁸
- The new Partnership for skills in Applied Sciences, Engineering and Technology (PASET) Regional Science Research and Innovation Fund, supported by both African governments and international donors, will provide PhD scholarships and early career training for Africans at selected lead institutions in areas of applied sciences, engineering and technology.⁶⁹
- African-based organisations like the African Economic Research Consortium (AERC)⁷⁰ and the African Institute for Mathematical Sciences (AIMS)⁷¹ (both of which have received funding from DFID), offer a range of subject-specific, post-graduate degree training in African institutions.
- The Regional Initiative in Science and Education (RISE) programme and its successors, supported by the Carnegie Corporation, funds African scientists and engineers to pursue Master's and PhD degrees through selected, university-based research and teaching networks in Africa.⁷²
- AAS and AESA are playing a key role in developing new African-led, Africa-based initiatives.

In conclusion, a number of countries in Europe and North America support discrete scholarship schemes like the UK, as well as a variety of embedded scholarship schemes with African university partners. As in the UK, a diverse portfolio of schemes of different types is often supported. There is a growing international trend towards fellowship and scholarship schemes which are embedded in more African-based and African-led initiatives, supported by multiple donors and overseas university partners.

67 Raetzell, L., Almqvist O., Lammers, F., Krämer, M., Franke, J. (2018), [Impact Evaluation of the Belgian University Development Cooperation](#): Lessons on the Evaluability of Institutional Partnerships and Scholarships (Syspons GmbH, NUFFIC, Special Evaluation Office of the Belgian Development Cooperation).

68 Nordling, L. (2018), [World Bank pour hundreds of millions into African science](#) (Nature).

69 [The PASET Regional Scholarship and Innovation Fund](#)

70 [African Economic Research Consortium](#)

71 [African Institute for Mathematic Sciences](#)

72 [RISE: Regional Initiative in Science and Education Networks](#)

7 Conclusion

This report is, to the best of our knowledge, the first to compare fellowship and scholarship provision for Africa across UK funding institutions and schemes. A recent WHO mapping exercise takes a similar approach and compares externally funded, health-related fellowships and scholarships, including a few UK funders, but focuses only on schemes delivered in African countries.⁷³ Despite limitations of the data (stated in Section 3), this analysis does shed light on the scale and distribution of a large body of fellowships and scholarships related to UK ODA and RCS in Africa, from which several observations can be drawn.

Current schemes for Africa are dominated by Master's level training, largely from Chevening and Commonwealth Scholarship schemes. Only a small proportion of schemes focus on training at the PhD level and above, the largest of which are Commonwealth Scholarships and DELTAS, which have quite different models. Postdoctoral and early career support is a small part of the UK portfolio, and a feature of more recent schemes, as is a shift in support towards training in African institutions.

This great diversity of UK schemes is similar to that of other countries which support Africa through fellowships and scholarships and is almost certainly complementary in its capacity to reach a wide range of future change agents and leaders. Whether these schemes could, collectively, deliver more impact through a more integrated approach may be worth investigating.

Broadly speaking, the UK schemes analysed are funding fellows and scholars predominantly across the same African countries, and the six nationalities/countries most supported by schemes are Nigeria, Kenya, Ghana, South Africa, Egypt and Uganda which combined represent 61.7% of all fellows and scholars supported. This distribution suggests that schemes may play a useful role in the UK Government partnerships with Africa, where DFID, SIN and DCMS will host regional hubs in Nigeria, Kenya and South Africa.

A closer comparison of UK fellowship and scholarship support in particular African countries, in terms of training at different levels and in subjects of priority to national and UK interests, may be of value. There may be opportunities for improving complementarity between schemes in supporting, for instance, different stages of strategic career paths or different national institutions. Opportunities may exist to integrate alumni activity from different schemes, to better support relations between UK and national governments in Africa. It may also be useful to compare where the UK is investing in fellowships and scholarships and where the UK is funding research and RCS programmes. Finally, this analysis provides an indication of African countries receiving less fellowships and scholarship support, which may deserve further consideration.

Participants in this mapping, from which a few key observations emerged, provided considerable information on their programmes. Schemes operate quite separately, but face similar challenges in a number of areas, such as inclusivity and gender parity, and have undertaken a diversity of innovative approaches towards design and evaluation of

73 Terra Morel, Dermot Maher, Thomas Nyirenda & Ole F. Olesen (2018) [Strengthening health research capacity in sub-Saharan Africa: mapping the 2012–2017 landscape of externally funded international postgraduate training at institutions in the region](#). *Globalization and Health* 14:77

schemes. Greater dialogue across schemes, and sharing of experiences and methods, may help to improve the overall UK offer regarding fellowships and scholarships for Africa, and ensure that future schemes access the best experience and practice for their development. A quick survey of other UK schemes at the university level, and of the changing pattern of fellowship and scholarship schemes internationally, indicate that university schemes should also be included in future dialogue and development of UK schemes.

There is a challenge in linking RCS investment for Africa between the individual level, where these schemes are focused, and the institutional level. Newer schemes are targeting institutional change, particularly through more African led initiatives, and even longer-standing schemes are moving in this direction, e.g. through a growing interest in split-site training partnerships. A dialogue on linking the UK fellowships and scholarship investment to improve RCS at all levels may be valuable, building on, while sustaining the valuable diversity of these UK initiatives.

8 Workshop to discuss report findings

UKCDR invited UK Government departments/funders, implementing partners, representative fellows of schemes and related stakeholders to a workshop in October 2019 to discuss the findings of the report and identify potential actions to add value to UK-funded fellowships and scholarships schemes for Africa. A group of over 40 stakeholders and experts from a broad range of organisations and schemes were represented at the workshop (see Table 1.14 and 1.15 in Annex for the workshop programme and participants).

Professor Charlotte Watts, Chief Scientific Advisor at DFID and Lead on Science, Technology and Innovation for the cross-Government partnerships with Africa, set the scene by explaining that the aim of the project was to facilitate learning across schemes and improve the coherence and impact of UK investments in view of future UK engagement with African governments and stakeholders on RCS.

The workshop considered sections of the report in sequence, through a series of breakout groups and plenary discussions, to generate conclusions and recommendations. Key points are summarised by theme, followed by five recommendations.

8.1 Current and future datasets

Several suggestions were made to improve the dataset that formed the basis of the draft report, which have been subsequently incorporated into this report. These included incorporating British Council and British Academy investments from BEIS and highlighting that CSC Master's scholarships for Africa delivered by distance (which account for c.40% of CSC funding) might not be considered as UK-based degrees, because scholars studied in Africa, often while in employment there. It was also noted that the dataset only captured a sample of schemes organised by UK universities, and that it did not include African PhD students associated with UK-supported research grants undertaken in Africa as this was not part of the scope of the mapping on dedicated schemes.

While inclusion of these would help us understand the full extent and pattern of UK-funded support, it was agreed that collecting this additional data would be very challenging. This would require research grantees to provide standardised information (e.g. nationality of scholar, subject of study) on training provided or facilitated by their projects. More generally, funders of fellowship and scholarship schemes might use lessons from the current analysis in considering how to design any future datasets and mapping.

8.2 Type of award

The great majority of awards to Africa are for Master's level training. It was acknowledged that these may or may not contribute to RCS long-term, as individuals may take up a variety of non-research career paths and that RCS was not the primary purpose in several of the schemes. UK-based Master's do serve an important role in building close relationships with the UK, which is particularly important for schemes like the Chevening

Scholarships. It was also noted that a possible driver of UK investment in Master's schemes is their relatively low cost, short duration (one year in UK vs two years in Africa) and capacity to deliver measurable outputs and outcomes more quickly than investment in PhD training. It was suggested that the UK might in future invest more in Master's within Africa where there is already capacity to facilitate these and strengthening African capacity to deliver Master's programmes locally.

To strengthen African research capacity, there was agreement that there should be an increase in support to PhD, postdoctoral and early career programmes. This need not come at the expense of existing Master's support, but could involve extension of existing training at PhD and post-PhD levels, or through new initiatives. Further development should address the whole "pipeline" of training for research career pathways, whether this involves training in the UK or Africa. In addition to specific research training, it was suggested that PhD and post-PhD training should include mentoring and training in career skills.

8.3 Balance of Africa vs UK training

The merits of UK- vs Africa-based training were discussed. Benefits of training in African institutions include, among others, the potential added value of strengthening institutional and environmental research capacity. An African fellow at the workshop observed that, where supervisory expertise and technical support similar to that in UK, African researchers would probably prefer to undertake PhDs within Africa. This is likely to make it easier for parents with children to undertake PhDs, while doctoral study in an African institution may make it more likely that a PhD would plan a research career in Africa, reducing the risk of "brain drain". External support for Africa-based PhD and post-PhD schemes may also help to stimulate investment by national governments in RCS.

Advantages of UK-based training include access for fellows and scholars to UK-based high quality supervisory and technical expertise, excellent resources and international research networks, though these are also increasingly growing across Africa. There are benefits to the UK from the research done by African students and the relationships established, which can support long-term collaboration and partnerships between African and UK institutions to address global development challenges.

There was agreement that both UK and Africa based training were valuable and complementary, and that both pathways to RCS should be encouraged. The recent trend towards more Africa-based training at the PhD and post-PhD level was seen as a very positive development that should be continued and expanded. Both UK and Africa based training schemes could be more closely linked to African institutions and institutional capacity strengthening. Split-site fellowships and scholarships and expanding opportunities for shorter term research visits and study in UK during and following PhDs may be ways to achieve this. Whether UK or Africa based, it was agreed that training schemes should be closely aligned with African regional and national strategies and priorities.

8.4 Geographical distribution

It was noted at the workshop that the majority of African fellows and scholars come from a narrow range of countries, reflecting particularly language, historical links and the strength of local educational and research systems, but other factors as well. The UK should consider supporting RCS across a broader range of African countries and, within countries, across a broader range of institutions, not just elite universities and institutes. Achieving a more effective distribution of training might be facilitated through

collaboration with African governments and pan-African bodies like AAS and the African Research Universities Alliance (ARUA).

8.5 Thematic distribution

High profile areas for African national development, including health and agriculture, dominate subjects of study. This may be appropriate, but a need for strengthening research capacity in more basic STEM disciplines that underpin research in these priority areas, such as physical sciences, as well as more capacity strengthening in social sciences was identified. It was agreed that UK funders should be sensitive to thematic priorities of African national government priorities and noted that some schemes like CSC Scholarships involve an initial stage of candidate selection by national governments, which reflect research areas they wish to strengthen.

8.6 Gender balance and equity

The workshop participants noted that progress had been made towards gender parity but that to achieve further progress future efforts might focus more on understanding and influencing the research culture and practices that may disadvantage women or other potentially disadvantaged groups. This could include providing more flexibility in training, with breaks or extensions that enable women with families to study, particularly at the PhD and post-PhD level.

Providing more support to disadvantaged groups and conflict-affected regions was discussed. This was seen as a challenge due to problems with finding and supporting local candidates and institutions. It was noted that some schemes had addressed this problem by finding intermediaries capable of supporting the identification and selection of fellows and scholars.

8.7 Evaluation of schemes

There was strong interest in sharing methods of evaluation and learning together how to improve evaluation, which led to several recommendations (Section 9). Collaboration on evaluation was seen as timely, as some recent initiatives, particularly with African-based programmes, are at the stage of learning what success should look and how to evaluate this in these new contexts.

9 Recommendations from workshop

The workshop identified five key opportunities for UK-funded fellowships and scholarships to improve the impact of UK investments and efficiencies in how schemes operate. Recommendations are specific to investments in Africa but some could be seen as general recommendations across all UK-funded schemes, including those not in this study.

Recommendation 1: Future PhD/postdoctoral/early career support

While the UK delivers high quality PhD and post-PhD training to African researchers in the UK and, increasingly, in Africa, this remains a relatively small proportion of the UK fellowship and scholarship investment to Africa. There should be consideration of extending existing, or creating new ODA-funded, schemes for training at this level, with new investments exploring the opportunity for African-based and -led schemes. These could be developed with relevant African institutions (governments, science councils, universities) and/or pan-African bodies to support a broader range of countries and institutions than currently engaged with UK schemes, and incorporate individual training with support to RCS at the institutional and environmental level where appropriate.

Recommendation 2: Cross-scheme alumni networks

Cross-scheme alumni networks within specific African countries or in regions could be established to support research careers. Networks could be open to graduates of UK supported schemes based in the UK or Africa. Benefits of membership could include opportunities to meet and learn from other alumni, and to develop new research collaborations in Africa and the UK. Networks could also provide opportunities to participate in specific training courses or apply for network-specific career enhancement grants or mobility schemes. The British Council, which is contracted by CSC to manage in-country activities, was mentioned as a potential lead organisation and DFID and GCRF were mentioned as potential funding sources.

Recommendation 3: Common approaches to evaluation

Common basic indicators, approaches and frameworks for fellowship and scholarship evaluation could be developed (building on work on RCS indicators by CCR LSTM and APHRC⁷⁴, funded by DFID) and shared across schemes to ensure quality and consistency in evaluating the overall impact of UK support to RCS. This could involve guidelines on information to be collected at the beginning of awards, at the end, e.g. destination of graduates, and at subsequent intervals to assess outcomes and impact. A cross-scheme working group could be set up to develop a framework and basic set of indicators or an organisation could be identified and resourced to collect and synthesise M&E data across schemes. ACU/CSC were mentioned as potential organisations to coordinate this effort.

⁷⁴ Khisa, A M., Gitau, E., Pulford J., Bates I. (2019), [A Framework and Indicators to Improve Research Capacity Strengthening Evaluation Practice](#) (APHRC, LSTM Centre for Capacity Research).

Recommendation 4: Sharing of information resources on schemes

A platform of resources for fellowship and scholarships schemes was suggested for those involved in developing and administering schemes. This could include, information on where particular schemes were investing (types of awards, nationalities, subject areas), training tools used in schemes, and methods used by schemes for selection, management and evaluation. A first step might be to scope what resources and core training and communication materials would be useful and available for sharing, and what resources would be required to establish and maintain a platform. In addition, a webpage or other communication tools could provide information for prospective or existing fellows and scholars on opportunities for training through different schemes, drawing on and integrating the communications activities in these schemes. A first step might be to understand what information across schemes exists. The British Council, DFID and UKCDR were mentioned as potential organisations that could facilitate action in this area.

Recommendation 5: Common branding across UK-funded schemes

Fellowship and scholarship schemes could be collectively branded as part of the UK support for RCS in Africa. This could be done so as not to reduce the visibility and independence of schemes, but to add value to their capacity to engage collectively with African governments and regional institutions as part of a broader UK development effort.

**The Annex is available in a supporting document
on the UKCDR website**



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