

## Section A: Official Development Assistance (ODA) and GCRF strategy

### The strategy

1. Summarise the key aspects of your three year **strategy for development related and GCRF research activity**, including:
  - a. Your institution's strategy and priority objectives for all development related research activity funded through all sources for three years from 2018-19.
  - b. A summary of the key aspects of your three year strategic plan for QR GCRF, in light of the criteria and objectives for the GCRF outlined in the guidance.
  - c. How activity funded through QR GCRF fits into your broader strategy and priorities for all development related research activity.
  - d. How activity funded through QR GCRF relates to the UK strategy for the GCRF.<sup>1</sup>
  - e. How your development-related and GCRF strategies relate to your wider institutional strategy for using QR.
  - f. Likely key barriers and enablers to implementing your strategy.
  - g. The key activities by which you will realise your objectives, such as capacity and capability building; mono-disciplinary, interdisciplinary and collaborative research; generating impact from research; meeting the full economic cost of GCRF activity funded through other sources; rapid response to emergencies with an urgent research need; and pump priming.
  - h. The main developing countries, included in the Development Assistance Committee (DAC) list, which you intend to collaborate with.

**a) Your institution's strategy and priority objectives for all development related research activity funded through all sources for three years from 2018-19.**

Loughborough University's institutional 'Building Excellence' strategy is articulated against 4 themes:

- Investing in our Staff
- Educating for Success
- Growing capacity and Influence
- Raising Standards and Aspirations

Our strategic research framework, known as CALIBRE (Collective Ambition at Loughborough for Building Research Excellence), is mapped against the 4 themes and

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<sup>1</sup> UK Strategy for the Global Challenges Research Fund,  
<http://www.rcuk.ac.uk/funding/gcrf/challenges/>

comprises 8 interconnected programmes built on a foundation of diverse strengths, explicitly identified, within each of our 10 Schools.

Our development-related research strategy is embedded within the CALIBRE framework and delivered primarily through the Global Challenges Programme, which maps to the 'Growing Capacity and Influence' theme of the University strategy. In this Programme, we have formally identified 4 areas: Changing Environments and Infrastructure, Health and Wellbeing, Secure and Resilient Societies, and Energy. Though the Challenges are not solely focused on the developing world, they do capture our priorities for GCRF and development-related research generally. Under the guidance of a professorial Academic Lead, each Challenge has identified its priority themes and priority activities, which are approved and monitored by the University Research Committee, chaired by the PVC(R). An associated budget supports delivery of aims by funding seedcorn projects and international networking. Seedcorn funding has previously been used to support travel of academics to develop partnerships around which to build future activity.

The Beacon Programme of the CALIBRE framework is also significant from a development-related research perspective. The Beacons, which reflect the existing internationally renowned and enduring research strengths at Loughborough, are Sport and Exercise, Built Environment, Transport Technologies, High Value Manufacturing, and Communication and Culture.

Loughborough University's development-related research plans are overseen by the specially convened GCRF Working Group, which in fact covers all international development funding streams and activity. This Working Group is supported by a dedicated Research Development Manager whose remit is to identify suitable sources of funding and to support networking, capacity building and strategic activities with developing countries. With activity gaining momentum, international networks are being developed and strengthened, increasing our portfolio of GCRF-funded activity including projects focused around flooding in Mexico, cooling buildings in India and Sport for Development in East Timor, Cape Verde and Nepal.

**b) A summary of the key aspects of your three year strategic plan for QR GCRF, in light of the criteria and objectives for the GCRF outlined in the guidance.**

Our QR GCRF strategy is embedded within that part of our Global Challenges programme that addresses problems and solutions in developing countries.

We understand the aims of the GCRF programme are to ensure that UK research takes a leading role in addressing the problems faced by developing countries through:

1. challenge-led disciplinary and interdisciplinary research
2. strengthening capacity for research and innovation within both the UK and developing countries
3. providing an agile response to emergencies where there is an urgent research need.

We further understand that the GCRF delivery partners have identified these four criteria for assessing use of QR GCRF allocations:

- a. Activity should be focused on problems and solutions.
- b. Activity should be underpinned by research excellence, and partners in developing countries should play a significant role in this where possible.
- c. Activity should have a high likelihood of positive impact on the economic development and welfare needs of developing countries.
- d. Activity should promote strong, enduring and equitable partnerships between academic communities in the UK and in the global south

Our Global Challenges are intended to bring together expertise from across our disciplines to deliver multi-disciplinary solutions to the biggest societal challenges of the day (GCRF aim 1, criterion a). We are focussed on bringing Loughborough researchers, delivering demonstrably excellent research, together with current and new partners from developing countries (GCRF aim 2, criteria b, c & d). We have convened workshops and seminars to drive new areas of activity and to support new partnership formation in topics where we have a track record, but in locations where we have not previously worked.

Examples of approved priority areas for our Challenges include (GCRF criterion c):

Under the Changing Environments and Infrastructure Global Challenge:

- Global water and resource management
- Natural Hazards and Human-landscape interactions

Under the Energy Global Challenge:

- Energy for International Development

Under the Health and Wellbeing Global Challenge

- Planetary Health
- Anti-Microbial Resistance

Under the Secure and Resilient Societies Global Challenge:

- Disaster Risk Management (connecting directly to GCRF aim 3)

**c) How activity funded through QR GCRF fits into your broader strategy and priorities for all development related research activity.**

QR GCRF supported activity fits directly into our broader CALIBRE research framework as outlined above in which our development-related research priorities are primarily delivered through the Global Challenges programme. It also aligns well with institutional sponsorship that we have received from EPSRC and STFC which we have used for similar areas including pump-priming and building capacity and capability.

We are also planning to link our QR GCRF to a third CALIBRE programme, the Institute of Advanced Studies, in which we invite leading academics from around the world to Loughborough to develop and build collaborations around key themes. Themes that have been utilised this year include communication, migration (the current theme) and energy (the third and final theme of the year). The 2nd and 3rd themes have elements that are relevant to QR GCRF.

**d) How activity funded through QR GCRF relates to the UK strategy for the GCRF.**

The aim of the UK GCRF Strategy is to ensure UK science takes the lead in addressing the problems faced by developing countries whilst developing the UK's portfolio of cutting edge research.

Our QR GCRF activity directly aligns with this strategy by supporting challenge-led research, strengthening the capacity for research, innovation and knowledge exchange both within our institution and also with our international DAC partners. The activity is ODA compliant and contributes towards the 17 Sustainable Development Goals.

The main areas from the UK strategy that our Global Challenges Programme covers are:

**LU Changing Environments and Infrastructure Global Challenge:**

- Clean air, water and sanitation

**LU Energy Global Challenge:**

- Affordable, reliable, sustainable energy

**LU Health and Wellbeing Global Challenge:**

- Sustainable health and well-being

**LU Secure and Resilient Societies Global Challenge:**

- Resilience and action on short-term environmental shocks
- Long-term environmental change including natural hazards
- Sustainable cities and communities
- Reduce conflict and promote peace

In addition, under our Beacon Programme, specifically the High Value Manufacturing Beacon, we are also active in sustainable production and consumption of materials and other resources

We have observed how our networking activities help to support the engagement and involvement of academics who have not previously worked in Low and Middle Income Countries (LMICs) but who have the research skills to respond to the challenges faced in these environments.

**e) How your development-related and GCRF strategies relate to your wider institutional strategy for using QR.**

QR funding has been the primary enabler in Loughborough University's journey to research-intensive status over the last 25+ years. Our institutional strategy relies upon the inherent flexibility of QR funding to enable strategic research investments in the people and facilities necessary to take forward new initiatives and to sustain initiatives still under development. This includes the opening of our London campus, the 10<sup>th</sup> School of the University, in 2015. We use QR funding to support the engagements with businesses and charities, which are integral to our institutional identity, and to match against other sources of public research funding where the full economic cost cannot be recovered. Our current Excellence 100 recruitment campaign, adding 100 outstanding academic staff to our community, is made possible by QR as is our new University Fellowship scheme that provides successful candidates with extended periods of release from regular duties to concentrate on a specific major academic initiative (in research in

the case of the QR-funded element). We also use QR as a significant contribution to the funding of PhD studentships. These are used for a variety of purposes including building critical mass for new initiatives, match contributions to leverage external funding, support for Early Career Researchers (ECRs) and in the CALIBRE Adventure Programme where we fund a small cohort of PhD students (we call them mini-CDTs) on a competitive basis on an especially high risk (in research terms) project.

In these fundamental respects, our strategy for QR GCRF parallels that for our mainstream QR funding, with the addition of an emphasis on building equitable and sustainable partnerships with HE in low- and middle-income countries. The appearance of GCRF funding and associated QR has been transformational, enabling us to accelerate greatly our collaborative research ambitions in the developing world. These have long been important to us, exemplified by the work, since 1971, of our Water, Engineering and Development Centre (WEDC) which is a world leading centre for developing knowledge and capacity in water and sanitation for sustainable development and emergency relief for people living in low- and middle-income countries. Currently, however, the level of QR GCRF limits the relative extent of the investments that are possible.

**f) Likely key barriers and enablers to implementing your strategy.**

They key enablers are funding and talent.

Flexible funding sources such as QR GCRF and our EPSRC and STFC institutional sponsorship have been critical in developing relationships, especially associated with travel for partners from LMICs who do not have access to local funding. We deploy these funds strategically through the Global Challenges and maintain oversight through the GCRF Working Group. To date, we have supported activity in areas from sport to infant nutrition through to storytelling and off grid energy.

GCRF project funding then allows work on the necessary scale provided project staff and students can be recruited.

A particular barrier we currently perceive is our inability to attract sufficient capable and motivated researchers (PhDs, PDRAs) to our projects. If GCRF funding could be used for such a purpose or if QR GCRF increased sufficiently, our proposed solution is to use a this funding to build a cohort of PhD students focussed on development-related research. For example, on a recent senior-level visit to India, it was clear that there was both demand from Indian students to study for a UK PhD and interest from Indian partners in development-related research but no funding stream sufficient to make such collaboration possible. This would be a very powerful way to build lasting relationships between UK academics and their counterparts in the LMIC while simultaneously solving the problems of today and nurturing the talent to solve the problems of tomorrow. We envisage that students might spend time in their home (LMIC) institution and some time in the UK. One of our current constraints is the lack of qualified academic partners with

the skills to manage larger scale research funding so nurturing in-country talent in this way is especially important to deliver a long-term solution. Of course, some students may choose not to return but whether PhD students settle in the UK or return to the LMIC, we are still building a critical mass of trained and motivated researchers to promote future collaboration.

We have already seen the potential for this in projects where we have PhD students from developing countries engaged in projects delivering impacts in their home countries:

- Improvements to municipal solid waste in Ghana;
- Value recovery from food waste (China);
- Operation and maintenance of water distribution systems (Nigeria);
- Water governance of self-supply systems (Nigeria);
- Understanding the role of Islamic faith-based organisations in the delivery of social services (Nigeria);
- Cost and benefit of water services Regulation (Malaysia).

A further barrier is the lack of certainty about funding beyond 2021, which makes some academics unsure whether to commit the considerable time required to build activity in this area. Despite this, we have encountered a considerable appetite amongst Loughborough faculty to engage in development-related research, including from many who had not previously engaged in such work.

**g) The key activities by which you will realise your objectives, such as capacity and capability building; mono-disciplinary, interdisciplinary and collaborative research; generating impact from research; meeting the full economic cost of GCRF activity funded through other sources; rapid response to emergencies with an urgent research need; and pump priming.**

A set of core activities that need to take place to realise our objectives under GCRF have been identified as the following:

- Developing interdisciplinary research projects through a series of internal and external workshops focused around our priority areas in order to increase the engagement of our academic community with international development challenges and bringing together those with experience of working with these countries with those who have not
- Pump priming research activities through seed corn funding and travel budgets to ensure our academics can build the equitable and sustainable partnerships necessary for development-related research.
- Supporting the ideas evolving from these activities to become larger and more ambitious and of interest to funders.
- Provision of dedicated staff time to carry out activities to support and carry out research for the benefit of developing countries.
- Building relationships with partners in LMICs

To be effective in research associated with rapid response to emergencies, our experience is that working relationships have to be in place with trust established. These 5 core activities are therefore even more important in such circumstances.

Considering these activities, the additional costs of engaging in development-related research, beyond those associated with a “regular” collaboration between partners in the UK or the wider developed world, are clear. While a source like QR GCRF can help cover the direct costs associated with preliminary activity, most costs go unrecovered and we are happy to meet these as part of our institutional commitment. It then becomes even more important for us to recover the full economic cost when the larger scale GCRF projects are awarded by e.g. the Research Councils, Newton and British Council.

**h) The main developing countries, included in the Development Assistance Committee (DAC) list, which you intend to collaborate with.**

The main developing countries that we intend to collaborate with in the short-medium term (covering the period 2018-2021) include:

Argentina  
Brazil  
China  
Colombia  
Ghana  
India  
Kenya  
Malawi  
Mexico  
South Africa

2. Provide details of the main intended **outcomes and impacts** of your strategy.

Overall, the intended impact of our strategy is captured by the aim of our Global Challenges programme, which is to bring together expertise from across our disciplines to deliver multi-disciplinary solutions to the biggest societal challenges of the day.

At the next level, we intend to deliver outcomes and impacts in the priority areas we have declared for our Global Challenges. The list below includes examples of current activity:

**Changing Environments and Infrastructure Global Challenge:**

Global water and resource management e.g. working in partnership towards sustainable and resilient Water and Sanitation for Health (WASH) services through our annual Water Engineering Development Centre (WEDC) conference

Natural Hazards and Human-landscape interactions e.g. reducing the impact of flooding in China and Mexico

**Energy Global Challenge:**

Energy for International Development e.g. improving the reliability of energy provision in India and Kenya in off-grid rural communities

**Health and Wellbeing Global Challenge**

Planetary Health e.g. Improvements in child and infant nutrition in Kenya and Ghana.  
Anti-Microbial Resistance

**Secure and Resilient Societies Global Challenge:**

Disaster Risk Management e.g. improving urban resilience in China

Specific projects where our QR GCRF is currently used to meet the full economic cost provide a more detailed view of intended outcomes and impacts:

1. New materials to pave the way for the commercialisation of fuel cells for real time power generation applications in India
2. Support and pathways for people living with disability in Southern Africa to raise awareness of cultural identity, heritage and sense of place as an asset and resource for sustainable economic growth.
3. New designs and control algorithms for low energy cooling and ventilation strategies for use in natural and mixed-mode residential buildings in India, founded upon rigorous scientific operating principles.
4. Evidence to drive future research and inform policies to improve the nutritional status of infants and young children living in poverty in sub-Saharan African countries experiencing rapid urbanisation.
5. Development of flood detection systems in Mexico using world leading hydrology sensing and prediction methods combined with the mobile phone systems.
6. Addressing societal impact on vulnerable flood-prone communities in Semarang, Indonesia.
7. Joint UK-India Clean Energy Centre to deliver the tools required for a step change in the power system management of intermittent energy sources.

**Management of GCRF**

3. How will your HEI **monitor** and **evaluate** its progress and compliance in ODA and GCRF activity, including assessing geographical distribution of activity, outputs, outcomes and economic and social impacts?

Please describe the policies, procedures and approach you have in place to measure progress, evaluate outcomes, identify lessons learned, and ensure ODA compliance.

To ensure effective management of GCRF and other ODA activity, especially from a compliance perspective, we have developed an internal policy which includes the following aspects:



- GCRF and other ODA related funding applications are recorded and flagged using our Agresso Costing Pricing and Award Management (CPAM) system to ensure that we can easily identify, monitor and report on activity in this area.
- ODA compliance is monitored at the proposal stage through assessment based on the Research Office “ODA Compliance Statement for Research Council Funding Applications”. This formal statement can be made available to you on request. It opens with questions originating from the RCUK guidance on GCRF:

## **ODA Compliance Statement for Research Council Funding Applications**

All RCUK applications related to the Global Challenge Research Fund must include an ODA Compliance statement of 1 A4 page.

**You must answer the following three questions in order (these questions may be worded slightly differently from different Research Councils):**

1. Which country/ countries on the DAC list will directly benefit from this proposal and are these countries likely to continue to be ODA eligible for the duration of the research?
2. How is your proposal directly and primarily relevant to the development challenges of these countries?
3. How do you expect that the outcome of your proposed activities will promote the economic development and welfare of a country or countries on the DAC list?

- Guidance has also been provided to academics on how to write an ODA statement and ensure their research is ODA compliant.
- All project partners including overseas beneficiaries are expected to complete a due-diligence questionnaire prior to commencement of the project and this includes financial, legal, ethical, equality and safeguarding issues that are of particular importance for stewarding funding related to and allocated to developing countries.

From an academic perspective, progress is monitored and evaluated in ways that are common across the academic research portfolio. For example:

- Project PIs, appropriately supported, take a significant responsibility to monitor and evaluate progress. This is often done in conjunction with management and / or advisory boards for larger projects.
- The Academic Leads of our Global Challenges are responsible for ensuring that a coherent programme of research is conducted across their Challenge. Where relevant, this would include consideration of geographical distribution.
- Progress of Global Challenges is formally monitored at the University Research Committee through regular reporting on agreed priority activities with measures of success and reports on the consequences of seedcorn funding.
- All Schools have internal activity, led by the Associate Dean, to monitor output quality and creation of impact. Once a year, each School reports to sub-committees of Research Committee that scrutinise in detail progress on all aspects of research quality enhancement and research impact development.
- The PVC(R) works directly with Associate Deans (Research) and Global Challenge Academic Leads to maintain alignment with University strategy.

- Matters such as Open Access compliance and reporting through Researchfish are managed in the Research Office, working with the Associate Deans.

Additionally, for this activity, we have established the GCRF Working Group, with professorial leadership and supported by a dedicated Research Development Manager, to have oversight of the full programme and to identify lessons learned from individual projects for sharing at the programme level.

## **Section B: Use of QR GCRF 2018-19 allocation and future QR GCRF priorities**

4. Please complete the table in Annex A2 detailing the expected spending and activities for QR GCRF in the academic year 2018-19. Note that the total QR GCRF spending must equal the indicative allocation (available in Annex C), and all activities must be ODA-compliant for strategies to be assessed as ODA-compliant overall.
5. Please add here any explanatory notes on how you have completed the table in Annex A2 that will help inform assessment of ODA compliance.

This table was completed following a review of existing GCRF-funded and other ODA-compliant activities funded both internally and externally. An assessment of planned expenditure for the academic year 18/19 was completed taking into consideration expenditure already committed. Unrecovered costs beyond our QR GCRF allocation are currently met from institutional funds.

6. How would your **priorities and activities** for 2018-19 QR GCRF change if the funding level differs from that outlined in indicative allocations? Please include detail of how priorities will change with increases and decreases to QR GCRF funding, and details of how each priority meets ODA criteria.

All of our activity, from broad priorities to individual activities, is assessed against the Research Office's "ODA Compliance Statement for Research Council Funding Applications" (see section 3)

Our main priority for QR GCRF remains meeting the full economic costs of eligible research funded by other delivery partners such as the Research Councils and Newton Fund. We anticipate the majority of our QR GCRF funding allocation being used in this way. The second priority is funding leadership and research development time for activity within our Global Challenges. The availability of QR GCRF has been critical in the decision to commit increasing resource to development-related research since the

introduction of the GCRF. Our additional priorities for 18/19 are the WEDC Conference, supervision of PhD students from DAC countries and support for University Fellowships.

Any decrease to QR GCRF funding for 18/19 would do great harm to an expanding portfolio of excellent research starting to deliver impact in the developing world. Some specific activities would have to be curtailed e.g. development-related research resource committed through the Global Challenges, WEDC Conference activity. Externally funded projects (not recovering full costs) would continue with immediate impact effectively spread across the research portfolio but the viability of future activity would be called into question and momentum would certainly be lost.

The consequences of increased funding depend significantly on the quantum of the increase and the certainty offered about its sustainability. The year by year funding structure (represented by this section of the document) is sub-optimal for the types of intervention that enhance research capability (in general, not just for GCRF). A commitment for the full period would open many more opportunities.

We do not expect fundamental shifts in our Global Challenge priority areas so the main effects of changes in funding will be in the mechanisms we use rather than the research areas we are active in. More funding allows us a better choice of mechanism which in term helps to accelerate progress and sustain benefits. Consequently, in these sections (6, 7 and 8), we will describe how we might work rather than on what we might work.

Uplifted funding for one year would mainly enable further FEC recovery on funded grants but we would also seek to award additional University Fellowships focussed on development-related research. (The scheme gives academics release from normal duties to pursue strategically important initiatives). Fellowship duration is up to one year. We have had our first success in the Rutherford Fellowships and hope to build on this. Matching with a University Fellowship is a possibility. Salary and on-costs vary according to the seniority of the Fellowship holder but £75k/year is a mid-range figure.

Having recognised the opportunity inherent in existing development-related PhD research projects, especially those undertaken by a native student, we would also look to enhance those projects. Infrastructure investments are also enabled by one year funding uplifts.

At this stage since the introduction of GCRF, we are still engaged in a number of partnership building activities enabled by our Global Challenge seedcorn funding and this would develop more quickly and effectively with increased 18/19 QR GCRF.

7. Based on indicative funding allocations, what are your **priorities** for QR GCRF activity in 2019-20? Please include detail of how priorities will change with increases and decreases to QR GCRF funding, and details of how each priority meets ODA criteria.

Our strategy will not change from year to year and so our priorities for QR GCRF will remain largely unchanged. FEC recovery (on a growing portfolio), staff support to the Global Challenge programme, the annual WEDC conference, support for University Fellowships, enhancements to existing PhD projects, infrastructure investments and seedcorn funding would all remain appropriate.

Some requirements will evolve, however, as time advances. For example:

- There will be less emphasis on partnership building and more on partnership working. To this end, we plan to increase the prominence of development-related research activity in our Institute of Advanced Studies (IAS), the purpose of which is to foster world-leading research with international partners. Our initial IAS programmes have resulted in significantly increased numbers of world-leading academic visitors (across all disciplines) to Loughborough, including our first Nobel Prize winner, and we are confident of replicating this in a development-related research theme.
- Our earliest funded projects will end during this period and we wish to investigate how the QR GCRF might be utilised to bridge gaps to ensure momentum is not lost, either in the research activity itself or with the partnerships formed.
- We would also look at seedcorn funding to accelerate impact from completed projects, where appropriate. We expect there to be a lot to learn once projects reach this stage.

If increased funding for 19/20 were confirmed at the same time as increased funding for 18/19 then we can introduce a unique development-related research strand to our Doctoral Prize campaign. Under our Excellence 100 recruitment campaign, we are investing in 20 Doctoral Prize posts; 10 per year in 18/19 and 19/20. These are PDRA posts for applicants within 2 years of PhD completion. Applicants submit their own independent research proposal and spend two years developing their idea and seeking, with Research Office support, external funding to continue their research. These are rare opportunities to pursue a personal research agenda at a very early carer stage and we expect to attract very high quality applicants. A quick confirmation of increased funding would enable incorporation into the scheme for 18/19 starters. Early confirmation of increased 19/20 and 20/21 funding would enable incorporation into the scheme for 19/20 starters. Salary and on-costs are in the region £50k/year per Prize holder.

8. Based on indicative funding allocations, what are your **priorities** for QR GCRF activity in 2020-21? Please include detail of how priorities will change with increases and decreases to QR GCRF funding, and details of how each priority meets ODA criteria.

Building on our responses to 6 and 7, we do not expect wholesale changes in our Global Challenge priority areas or in the mechanisms we choose to use that are enabled by QR GCRF. FEC recovery (on a growing portfolio), staff support to the Global Challenge

programme, annual WEDC conference, support for University Fellowships, enhancements to existing PhD projects, infrastructure investments and seedcorn funding would all remain at the core of approach.

If increased funding for 3 consecutive years were confirmed, we would look at a CALIBRE Adventure call to establish a mini-CDT (5 studentships) dedicated to development-related research. The mini-CDT would be awarded on a competitive basis, using the process that we have developed and refined over the last 3 years, and is potentially transformative for the successful research area. At FEC, these investments come to £750k and this would be shared between QR GCRF and institutional funds.

A combination of these short, medium and longer term interventions (Fellowships, Doctoral Prizes and mini-CDT) would represent an incredibly powerful foundation from which to build a world-class development-related research activity.