



Making science work for development

The Evolving Research for Development Landscape

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Making science work for development



Department for
Business, Energy
& Industrial Strategy



Department
for International
Development



Government
Office for Science



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The Scottish
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Research
Council

NERC

SCIENCE OF THE
ENVIRONMENT



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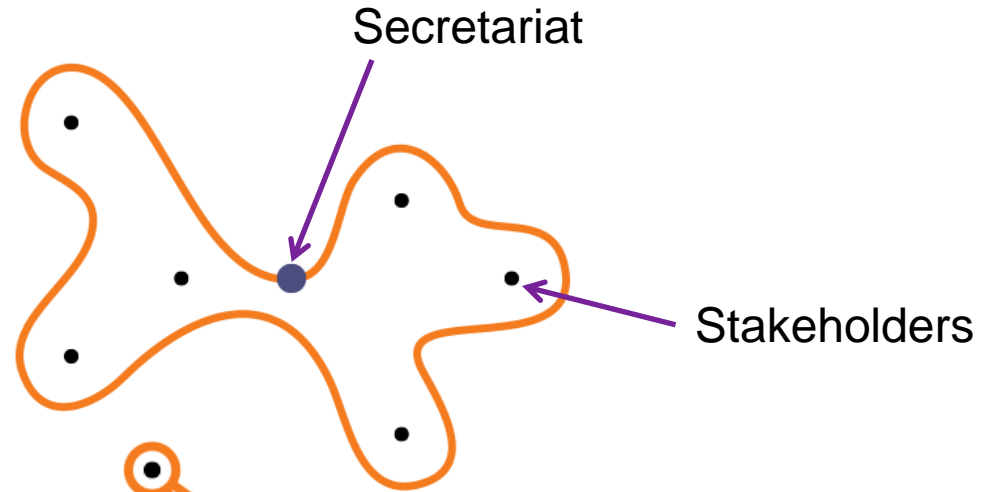
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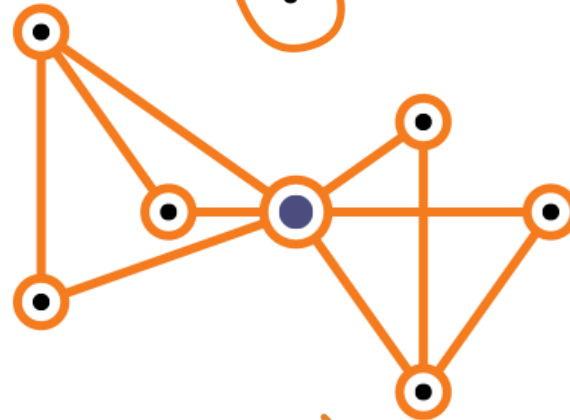
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What does UKCDS do?

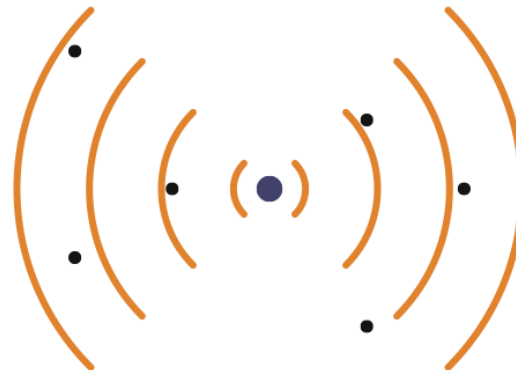
- Bring people together



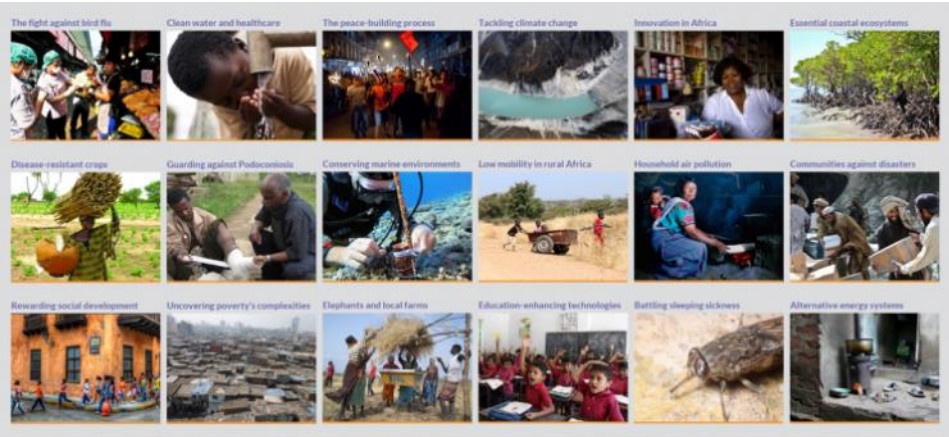
- Share information



- Promote opportunities



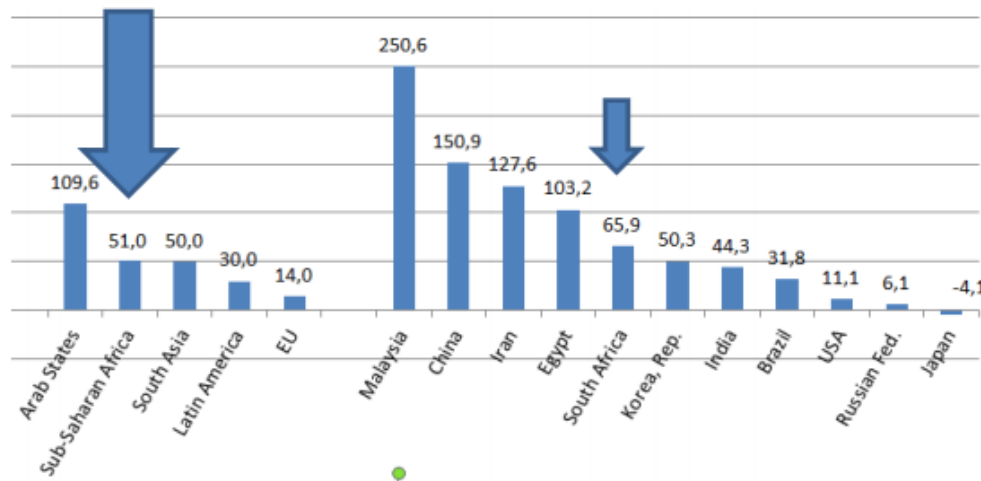
Connecting research with development challenges: the changing landscape



Rising economies and investment in science, technology and innovation (STI)

Many African countries now have STI policies (e.g. 11 out of 15 SADC countries). Several have increased their financial commitment to R&D substantially since 2009, including:

Egypt: 0.43% ➔ 0.68% of GDP
 Ethiopia: 0.24% ➔ 0.61% of GDP
 Kenya: 0.36% ➔ 0.79% of GDP
 Mali: 0.25% ➔ 0.66% of GDP
 Senegal: 0.37% ➔ 0.54% of GDP
 Uganda: 0.36% ➔ 0.48% of GDP



Challenges

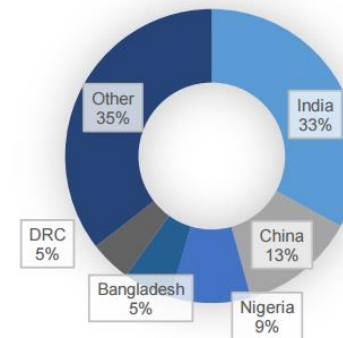
- Fragmented R&D systems
- Poor university-industry collaboration
- Drop in government funding for agricultural R&D in SSA

Increasingly fragmented development landscape

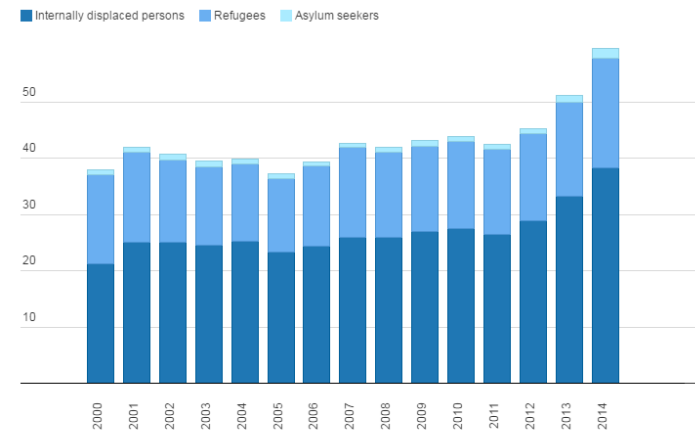
Key development trends

1. Inequality
2. Fragility and conflict
3. Urban poverty
4. Changing demographics
5. Environmental change
6. Resource scarcity

Top five countries, as a share of global extreme poor



Millions of Individuals Displaced by Conflict



Source: UN High Commissioner on Refugees, Internal Displacement Monitoring Centre

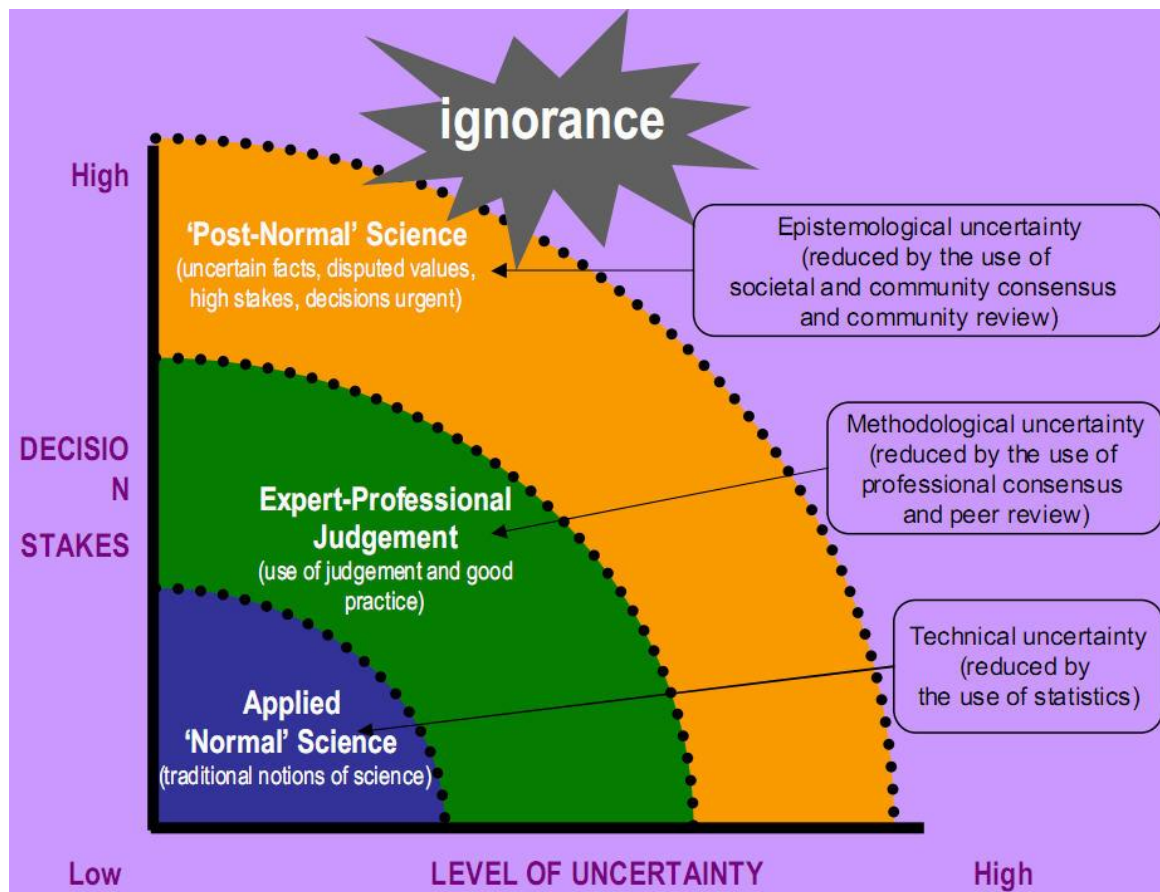
¹ The Data Report: putting the poorest first, 2015

² Financing the future, How international public finance should fund a global social compact to eradicate poverty, ODI

³ Global Monitoring Report 2014/15: Ending Poverty and Sharing Prosperity, World Bank, 2015


Changing role and position of science

'Wicked problems' or post-normal: complex, facts uncertain, stakes are high, urgent decisions, values are in dispute




And in the UK?

1. Strengthening global peace, security and governance
2. Strengthening resilience and response to crises
3. Promoting global prosperity
4. Tackling extreme poverty and helping the world's most vulnerable



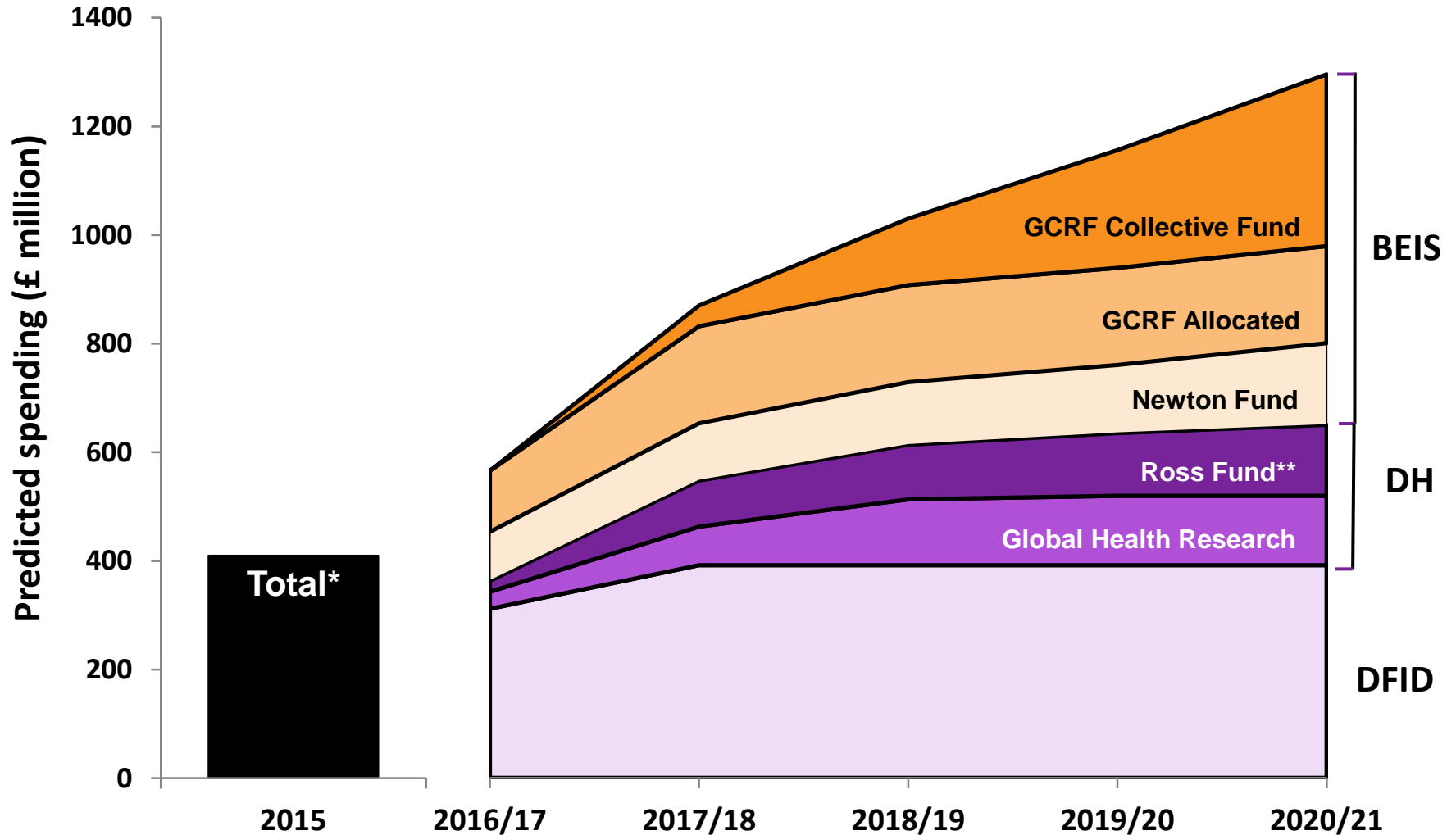
HM Treasury



Department
for International
Development

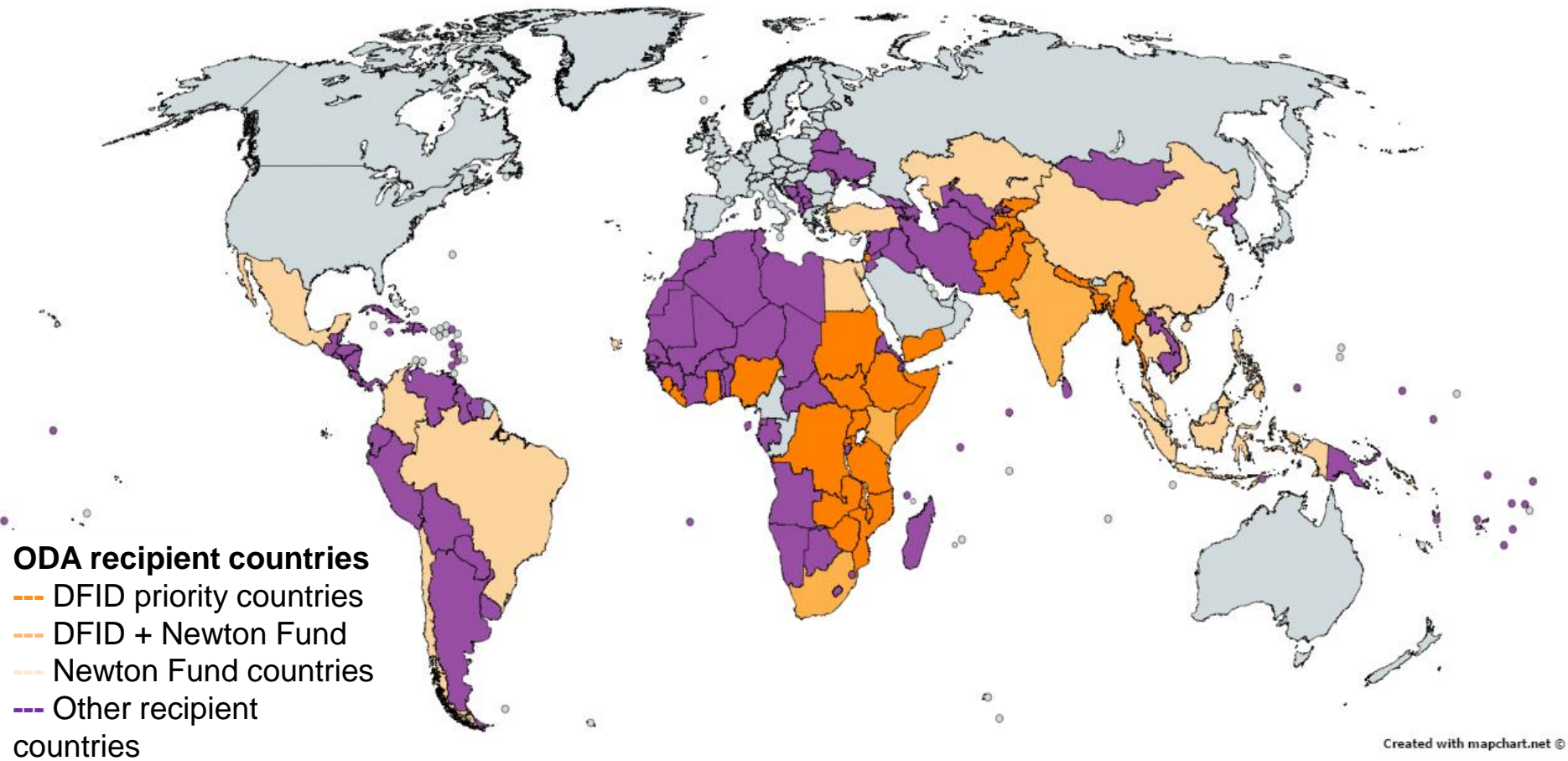
UK aid:
tackling global challenges in the
national interest

Rising ODA R&D spend across government: 2016-2021*



* Based on UKCDS estimates from published forecasts or figures provided by members

** DH managed Ross Fund spending. Minority (estimated at <20%) is for purposes other than research, surveillance or innovation



ODA funded research

- Impact on development challenges
- Interdisciplinary
- Attracting new research teams/ideas
- The strengths of UK research in helping to contribute to challenges
- Building new partnerships
- In line with UK Aid strategy and Sustainable Development Goals
- Must qualify for classification as ODA (OECD-DAC definitions)

DFID Research Review

Research Review focuses on DFID's areas of comparative advantage and complementarity to other funds.

Impact: does research focus on an important and practical development challenge & increased focus on research uptake

Quality: will the commissioned research be of the highest quality?

Deliverability: will the research deliver benefits within a realistic timeframe?

Cost: has every possible step been taken to control costs?



DFID Research Review



October 2016



DFID research priorities

Fragile and conflict affected states:

- Research around security and justice, migration, taxation and accountability, cross border drivers of conflict and justice
- Multi-disciplinary research on transformational development in African cities
- Research and innovation in humanitarian settings including building resilience and delivering education in emergencies

Health: vaccines and infectious diseases (half of Ross Fund), resilient health systems, reaching the most vulnerable in health crises, maternal health

Climate, Energy and Water: scale-up access to clean energy and access to water and climate science including weather disaster risk reduction

Agriculture: commercialisation and food systems with strong focus on women, investment in sustainable agriculture including nutrition and resilience to climate change, speeding up development of productive and resilient crops and agricultural technologies

Economic development: what works best to build foundations for economic development?

Department of Health

SBRI / / Competitions / / New vaccines for global epidemics: development and manufacture

Two funding streams:

- Ross Fund: ~£500 million over 5 years
 - Anti-microbial resistance
 - Infectious diseases with epidemic potential
 - Neglected tropical diseases
- Global Health research programme: ~£400 million over 5 years
 - Funding through NIHR
 - Partnerships and capacity strengthening



Status: Closed

Key features: The Department of Health is to invest up to £10 million in two competition streams in line with the priorities identified by the UK Vaccine Network.

Programme: SBRI

Award: Up to £10 million

Opens: 29 Feb 2016, 00:00

Registration closes: 27 Apr 2016, 12:00

Closes: 04 May 2016, 12:00

Support phone number: 0300 321 4357

Government launches £60 million call for global health research

Date: 18 November 2016

UK universities are being invited to apply for [Department of Health funding](#) for research to benefit people's health in low and middle-income countries across the globe.

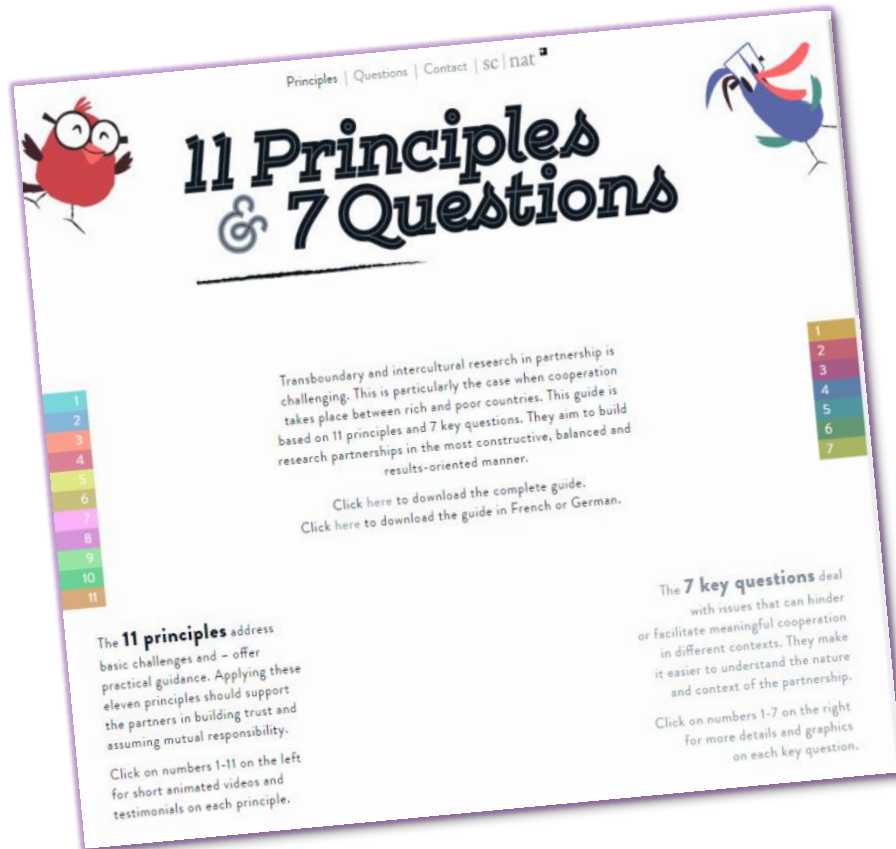
£60 million will be available for successful universities looking to expand their existing global health work, or for new entrants to the field.



Its about approach and context

- Is the research relevant and needed? – check national strategies
- Is there traction and engagement in the countries where the research is taking place?
- Does the research shed new light on complex challenges? E.g. synergies and tradeoffs across the SDGs
- Focus on impact: networks and implementation as well as new ideas and technologies
- Delivering excellent interdisciplinary research AND building sustainable capacity
- Creating and maintaining equitable partnerships

Issues to think about when developing partnerships



Principles | Questions | Contact | sc | nat²

11 Principles & 7 Questions

Transboundary and intercultural research in partnership is challenging. This is particularly the case when cooperation takes place between rich and poor countries. This guide is based on 11 principles and 7 key questions. They aim to build research partnerships in the most constructive, balanced and results-oriented manner.

[Click here to download the complete guide.](#)
[Click here to download the guide in French or German.](#)

The **11 principles** address basic challenges and – offer practical guidance. Applying these eleven principles should support the partners in building trust and assuming mutual responsibility.

Click on numbers 1-11 on the left for short animated videos and testimonials on each principle.

The **7 key questions** deal with issues that can hinder or facilitate meaningful cooperation in different contexts. They make it easier to understand the nature and context of the partnership.

Click on numbers 1-7 on the right for more details and graphics on each key question.

11principles.org



Finding and Building Effective Partnerships

Working in partnership across countries, disciplines and sectors is vital to understand the context of international development challenges and develop appropriate solutions.

Researchers are excellent at developing collaborations, however, working in global development can add specific challenges. These include finding the right partners in other countries and sectors, overcoming cultural and language differences, creating equitable relationships, and developing effective communications. Below we've put together a variety of resources to help you build successful, high impact collaborations.

Creating an effective, equal partnership

There are no simple rules for how to build efficient, effective and equitable research collaborations or partnerships. Factors for success include:

- A common, shared vision and purpose and realistically defined goals
- Support for the partnership from participating organisations
- Equitable sharing of resources, responsibilities, and benefits
- Transparent decision-making
- Creation of genuine respect and trust between the partners
- Pursuit and achievement of higher level outcomes beyond the partnership itself

There are lots of guides and resources available with tips and suggestions for how to build successful partnerships. We've picked out a few below:

General guides

- The Partnering Initiative provides a wealth of resources including case studies and tools for developing transdisciplinary and cross-sector partnerships in international development
- Co-producing knowledge is a toolbox of methods for jointly producing knowledge across different academic and non-academic fields of expertise.

Planning and building a partnership

- A brief two-page 'how to' guide from CGIAR with tips on planning and writing collaboration agreements for successful partnerships.
- An easy to read and practical Guide for Transboundary Research Partnerships with 11 principles and 7 key questions to analyse factors that hinder or enable partnerships in different contexts
- A slightly longer and in-depth guide of Good practices in Educational Partnerships based on experiences from UK-Africa partnerships in Further and Higher Education
- ELRHA Guide to Constructing Effective Partnerships between humanitarian and academic organisations.

Fairness and equitability in research partnerships

Before the research happens:

- Joint shaping of the research agenda
- Explicit research plan with clear budgets, roles and responsibilities
- Assessing research and management capacity needs
- Awareness of financial management challenges – payment in arrears, due diligence

During the research:

- Fair contracting and compensation
- Building capacity locally including research leadership
- Avoid imbalance in status e.g. research planning, authorship, governance/management/supervision
- Inclusion of communities and policymakers

After the research – fair benefit sharing:

- Credit and recognition for contribution
- Access to data and intellectual property
- Sustainable legacy planning

Role of institutions

Develop institution wide guiding principles for good research management in partner overseas institutions

Provide institution-to-institution capacity strengthening e.g. financial, communication, grants



rfi.cohred.org

How can UKCDS help you?

Using mobile technology for disease early-warning systems

The recent Ebola and Zika virus outbreaks have highlighted the pressing need for early warning systems to prevent the spread of infectious diseases. i-sense is a 5-year EPSRC-funded research programme, combining self-reported symptoms on the web with mobile phone-connected diagnostic tests for rapid detection of disease outbreaks. Following an initial focus on influenza, HIV and bacterial infections in the UK, the team has discovered the impact that technologies can have on HIV and Ebola in Africa.

Diagnosis and treatment of HIV/AIDS and Ebola in Africa

"We are just beginning to see the power of harnessing telecommunications for health" says Professor Rachel McKendry, Director of i-sense. "In the UK smart phones are ubiquitous and even where we work in South Africa, in excess of 90% of households have access to a mobile phone. Our research aims to harness the power of smartphones to detect the early onset of disease when symptoms first appear."

A new collaboration on HIV with the Africa Centre for Population Health (South Africa) began when Prof Deenan Pillay, the Deputy Director at i-sense, moved to work there. Researchers from i-sense and the UCL Bartlett Centre for Advanced Spatial Analysis (CASA) created a digital dashboard that shows, in real-time, whether HIV-ICA (ICA) infected participants are linked to antiretroviral therapy services. The infected participants are linked to antiretroviral therapy services on the map to safeguard their identity but still enables the identification of areas where further support is needed. Following a trial of 24,000 patients with the Africa Centre, the ideas are now being used to build the first online NHS HIV self-testing patient pathway, an example of 'reverse innovation'.

The team have also repositioned their influenza technology to Ebola using paper microfluidic tests (similar to pregnancy tests) and a mobile phone app linked to a smartphone camera. This project was initiated by PhD student Polina Brangei in Prof Molly Stevens team at Imperial College London, and in collaboration with Prof Rachel McKendry's team at UCL. A paper is currently being written up.

Building public trust in the technologies and having strong data security is vital. The team are working with computer scientists, behavioural scientists, ethicists and a wide range of potential users at the beginning of technology development to address these challenges.

Impact

These projects are at an early stage but demonstrate the potential of the technologies to be rapidly adapted and transferred to combat new diseases anywhere in the world.

For the Director of i-sense, Prof Rachel McKendry, the project has had a lasting personal impact. Having never worked in global development before, her first trip to the Africa Centre was a life-changing experience.

"I came back from South Africa inspired and started thinking about the greatest burden of disease in developing countries."

Lessons, challenges

Promoting transparency. The i-sense team is working with partners. To help us and workshops to get that support these

17 JUNE 2016

UKCDS' new Director has been announced. I also highly recommend the summary report about interdisciplinary research with case studies of mechanisms from different research organisations around the world.

Announcements and news

- UKCDS' new Director, Vicky Morgan, has been announced.
- Wellcome researcher Helen Lee has won the Popular Prize at the European Inventor Award 2016 for her mobile HIV diagnostic kit.
- Summary of the 2016 Annual Meeting of the Global Research Council including summary reports on supporting interdisciplinary research and the status of women in research.

Funding

- The Soil Security small grants programme is open. Funded by NERC, BBSRC, the Scottish Government and Defra, the funding can be used to study non-UK soils, although proposals should have relevance for understanding and managing UK soils. Deadline 9 August 2016.
- MRC and DFID have announced a further call for proposals for the prestigious African Research Leader awards. Deadline 14 September 2016.
- UK-Indonesia Joint Health Research Call on Infectious Diseases. Funded by the MRC and the Dana Ilmu Pengetahuan Indonesia (DPI) under the Newton Fund. Deadline 14 July 2016.

Other Interesting News and Links

- The new EAT-Lancet Commission will provide a 'roadmap' of food systems reform for the policy makers who are working to deliver the UN Sustainable Development Goals (SDGs) and uphold the Paris Climate Agreement.
- A new analysis predicts that falling fish stocks could have serious health consequences for more than 10% of

FUNDING LANDSCAPE

Funding for global development research is increasing in size and variety. Explore this hub for further information about key funding opportunities.

FUNDING PROGRAMMES

We've created this hub to help you navigate the funding opportunities in global development research. Each of the sections below describes a key fund or funder and within each there is an overview of the focus areas for the funding, where they fund, eligibility for both UK and international researchers and their ongoing programmes.

All of the funding apart from that from the Wellcome Trust is part of the UK's commitment to spend 0.7% of the UK's Gross National Income on Official Development Assistance (ODA). To be accepted as ODA, this funding must meet certain criteria.

DFID UK aid from the British people

GCRF

Newton Fund

Wellcome Trust

What's happening in Sci4Dev? A weekly roundup of news and views

JENNIE DODSON

RELATED CONTENT

NEWS

New Director of UKCDS

Today, Vicky Morgan has been announced as the new Director of the UK Collaborative on 16 JUNE 2016

MORE RELATED

Coriopol Scientist Visits Ceirra Leone Hospital (Credit: IBi|photos)

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