Research Councils UK
Energy Programme

Kathryn Magnay, Head RCUK Energy Programme

For a Low Carbon Energy Future

The Research Councils

- Research Councils UK (RCUK) are responsible for investing public money in research in the UK to advance knowledge and generate new ideas which lead to a productive economy, healthy society and contribute to a sustainable world.

Our Mission

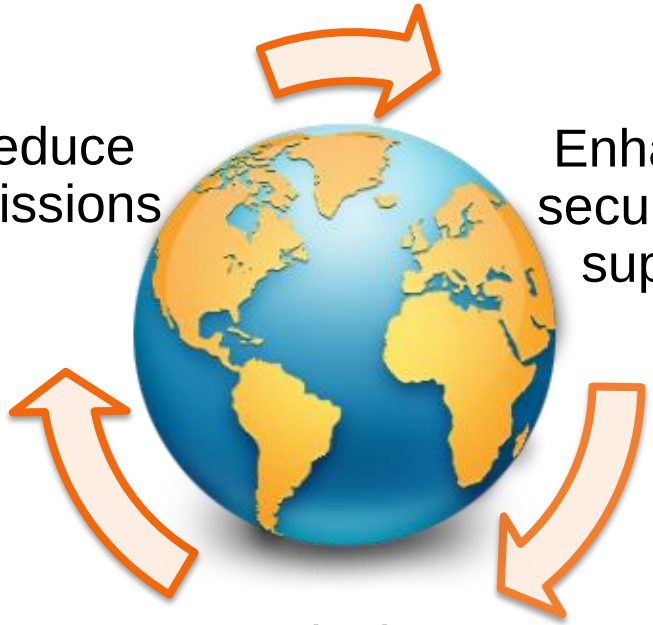
To support research and postgraduate training to tackle all elements of the energy ‘trilemma’

80% reduction in GHG emissions by 2050

15% of energy from renewable sources by 2020.

Increases in energy efficiency

Reduce emissions



Enhance security of supply

Reducing cost

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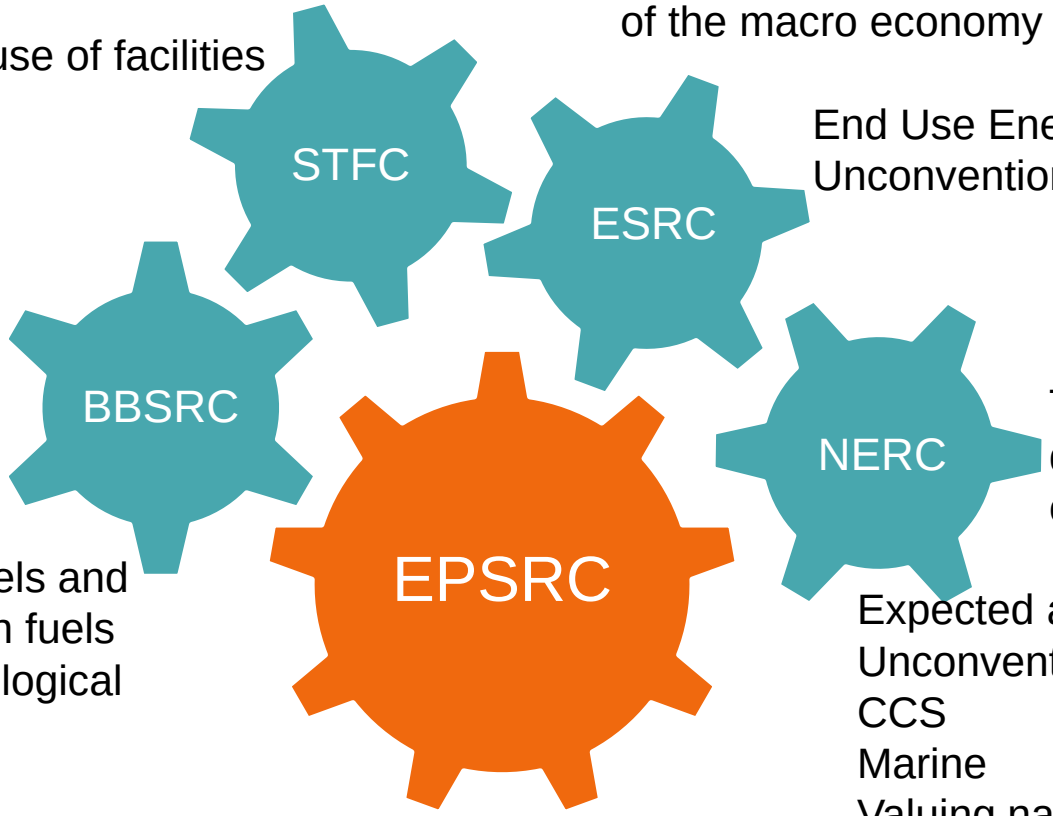
Housing; being in a digital age; productivity; mental health; foundations of the macro economy

Centred on use of facilities

End Use Energy Demand
Unconventional Hydrocarbons



Targeted support is determined by research community.

Advanced biofuels and other low carbon fuels produced by biological processes.

Specific interests:
Biorefinery
Multipurpose crops

All aspects of engineering and the physical sciences that contribute to the energy trilema

Expected areas of interest:
Unconventional hydrocarbons,
CCS
Marine
Valuing natural capital
Oil and gas decommissioning
Sustainable gas futures

Energy Programme Thematic Priorities:

- Investment in high-quality**,** inter-disciplinary research to target the **energy** '**trilemma**' of reducing carbon emissions, energy security and affordability
- **Systems Approach:** whole energy systems and integration within the energy system.
- **Understanding Future Energy Options:** Social, governmental environmental and economic implications.
- **Reducing Energy Consumption and Demand:** Development of behavioural, market and technological advances informed by a whole system understanding.
- **Enabling Technologies:** that underpin research across disciplines, e.g. energy storage, materials research; and cross cutting themes, e.g. heat, transport

Maintaining capacity

Accelerating deployment of technologies

Speculative research

Coordinated policy outputs

Strategic international collaboration

Opportunities for Energy Research

- Multidisciplinary research
  - Systems level research
  - Cross cutting themes
  - ODA
- Innovation funders – IUK, DECC, DFID, ES Catapult, ORE Catapult
- Mission Innovation
- ODA
- Mining existing research
- Existing research portfolio
  - good base to start from,
  - Making connections and networking potential issue
- Maintaining critical mass
  - Connecting the community
  - Adventurous research, learning from other disciplines

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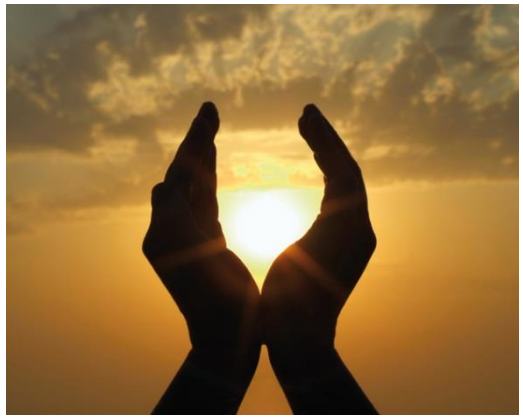
Excellence with impact



Global Challenges Research Fund

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Global Challenges Research Fund

Cutting edge research which addresses the problems faced by developing countries

2015 Government Spending Review Outcomes

- Address global challenges through disciplinary and interdisciplinary research
- Strengthening capability for research and innovation, within both UK and developing countries
- Agile response to emergencies and opportunities

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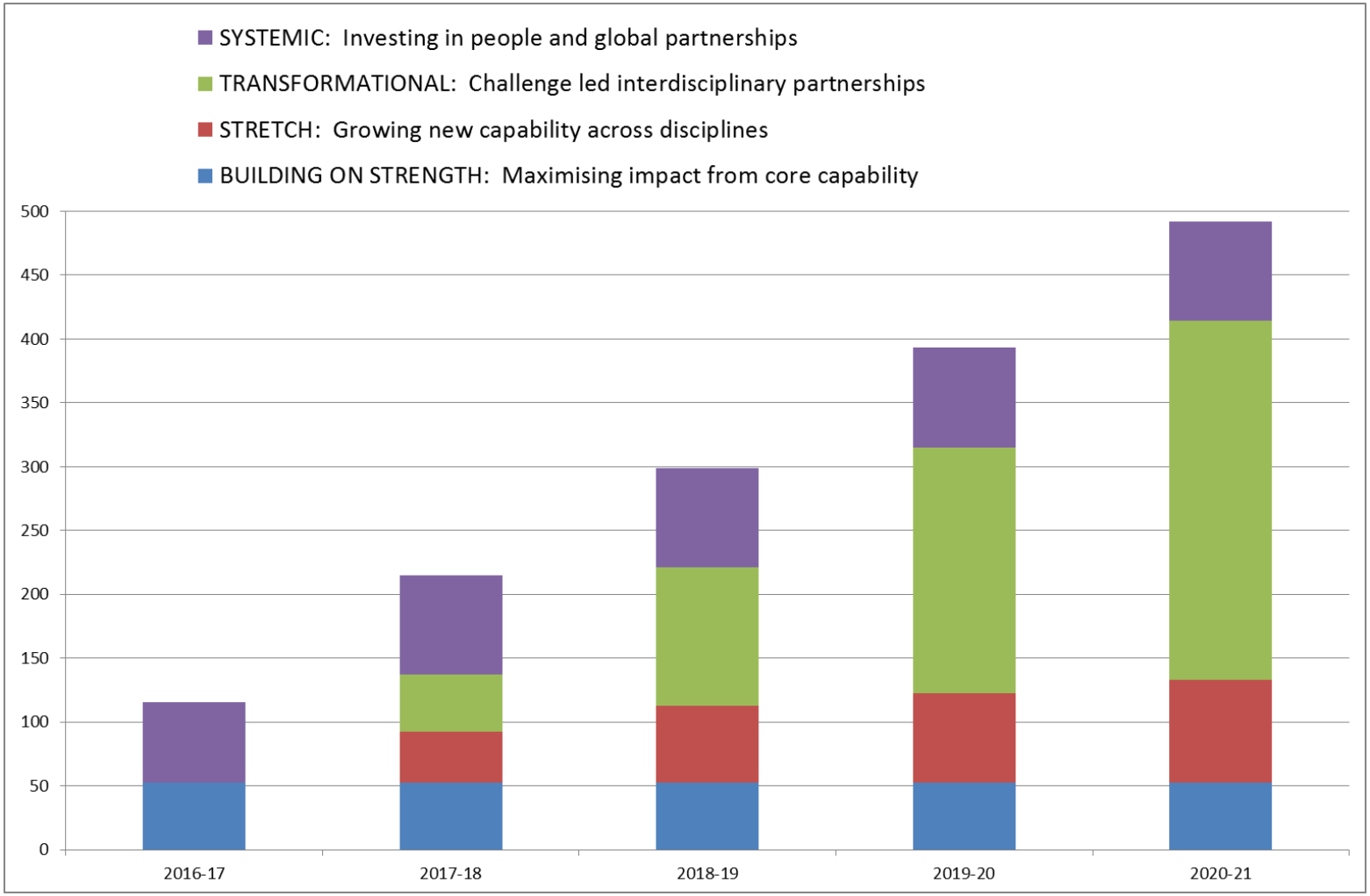
Our Proposal to BIS
Forward investment profile



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Strategy for future investment

SYSTEMIC

investing in people to support the development of research capacity. Creating a legacy of global partnerships as the foundation for future opportunities, including renewal and growth through targeted early career investments , new entrants and supporting institutional development. Systemic activities will build and maintain capability across the areas below

TRANSFORMATIONAL

All challenge topics can benefit from an interdisciplinary and multidisciplinary approach. However, it is particularly suited to complex, multidimensional challenges seeking new insights or needing radical approaches. Potential outcomes include innovative ways of thinking and new disciplinary collaborations that help to help to tackle for instance, the consequences for developing countries of climate change, demographic shifts, economic development, rapid urbanisation and conflict.

STRETCH

Research areas with a strong research base, but not necessarily orientated to developing country contexts; examples include clean energy or industrial biotechnology where the opportunity for impact in developing countries is considerable but not yet fully realised.

BUILDING ON STRENGTHS

Research areas with a strong UK research base, closely engaged with the challenges faced be developing countries, often actively engaged with UK and international partners and making a significant global contribution through research and innovation. Potential outcomes include developing existing work on infectious diseases, crops for developing countries and forced migration.

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GCRF Strategy development

Consultation

Town Meetings

Call for Evidence

Global Engagement

Strategic Context

UK Aid Strategy

UN Global Goals

GCRF Strategy

Key Stakeholders

Delivery Partners

Strategic Advisory Group

Department for International Development

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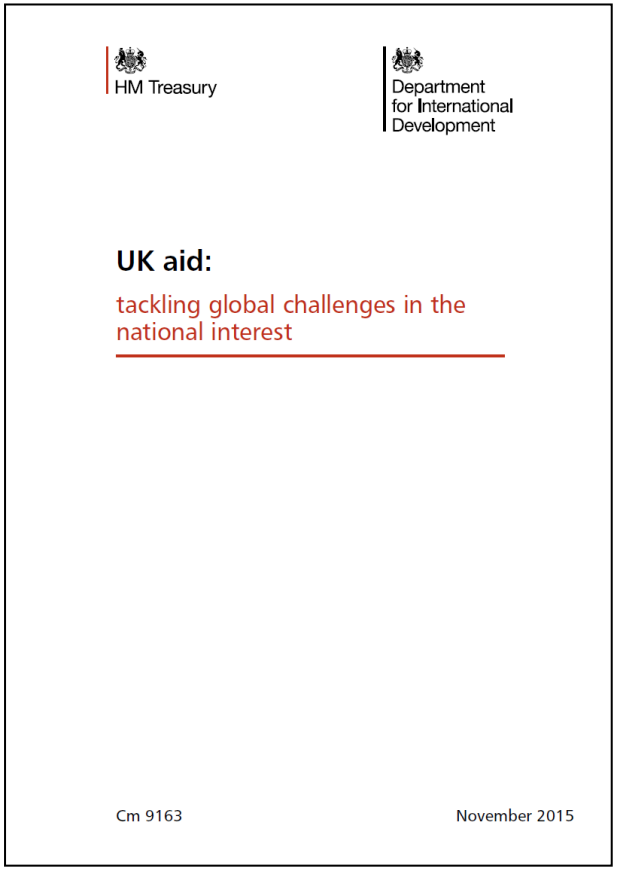
Global Context

UK Context

UK Aid Strategy

- Strengthening global peace, security and governance
- Strengthening resilience and response to crises
- Promoting global prosperity
- Tackling extreme poverty and helping the world's most vulnerable



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Global Challenge Research Fund Strategic Advisory Group

Mike Aaronson	University of Surrey (Chair)
Charles Godfray	University of Oxford
Andy Haines	London School of Hygiene and Tropical Medicine
Richard Jones	University of Sheffield
Sally Macintyre	University of Glasgow
Helen Sang	University of Edinburgh
James Stirling	Imperial College London
Jeff Waage	London International Development Centre
Alan Wilson	University College London
Alan Winters	University of Sussex
Charlotte Watts	DfID
Jenny Dibden	BEIS

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Town Meeting Feedback

Nexus research:

- Major opportunities at intersects between global challenge topics
- Trade-offs, causality
- Cross-cutting issues

Examples

- Energy-food-water
- Mental health – conflict

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Pathways to Impact

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Research agenda for change (1)
Leave no one behind

Draft

Our vision is to create new knowledge and drive innovation that helps to ensure that everyone across the globe has access to:

- Secure and resilient food systems supported by sustainable marine resources and agriculture
- Sustainable health and well being
- Inclusive and equitable quality education
- Clean air, water and sanitation
- Affordable, reliable, sustainable energy

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Research agenda for change (2)
Sustainable economies and societies

Draft

Our ambition is to identify new responses to the challenges arising from changes in population, technology, consumption and pressure on the environment:

- Sustainable livelihoods supported by strong foundations for inclusive economic growth and innovation
- Resilience and action on short-term environmental shocks and long-term environmental change
- Sustainable cities and communities
- Sustainable production and consumption, e.g. materials and other resources

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Research agenda for change (3)
Support peace and justice

Draft

Our goal is to understand how to strengthen the institutions that underpin peaceful societies, good governance and respect for human rights and the rule of law. We need new insights to help:

- Understand and effectively respond to forced displacement and multiple refugee crises
- Reduce conflict and promote peace, justice and humanitarian action
- Reduce poverty and inequality, including gender inequalities

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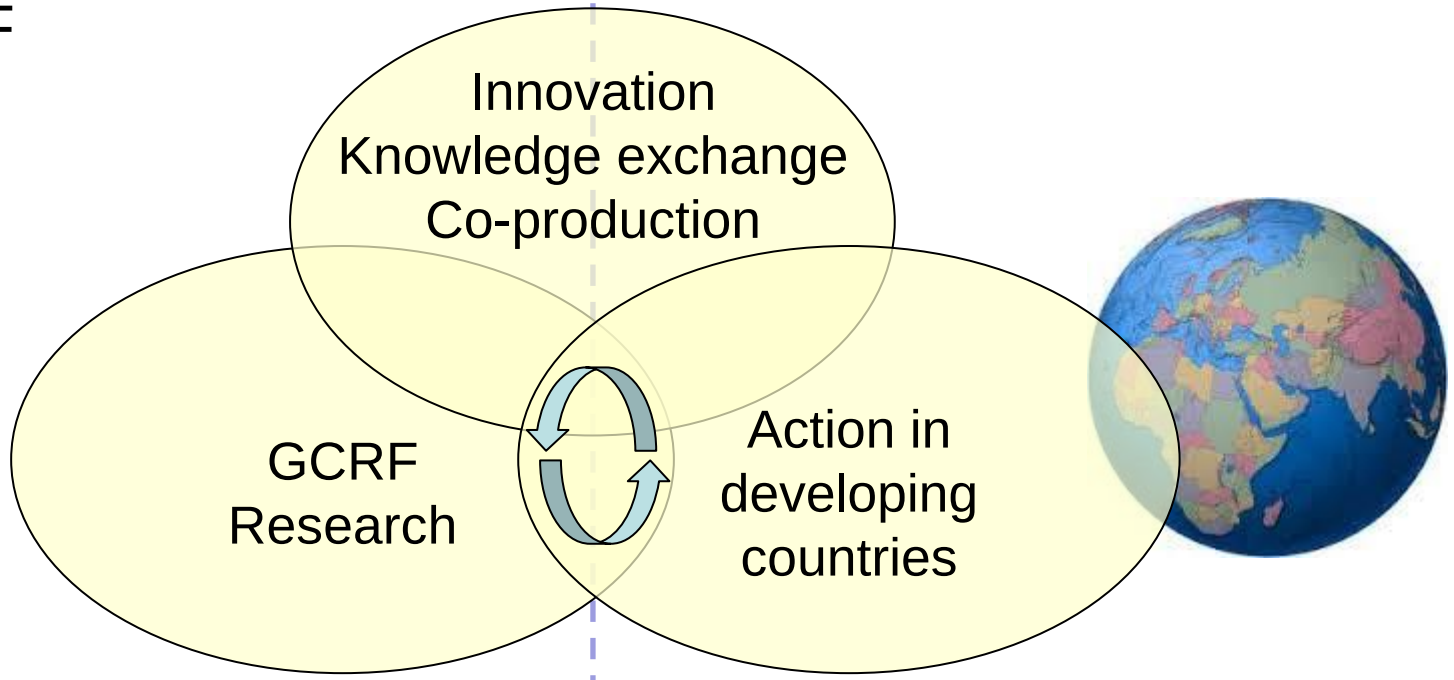
Pathways to Impact
Stakeholder roles

GCRF



UK Academies

UK Stakeholders
(Government, Charities, Business)

International Stakeholders
(Universities, Charities, UN, NGO, Overseas Governments)

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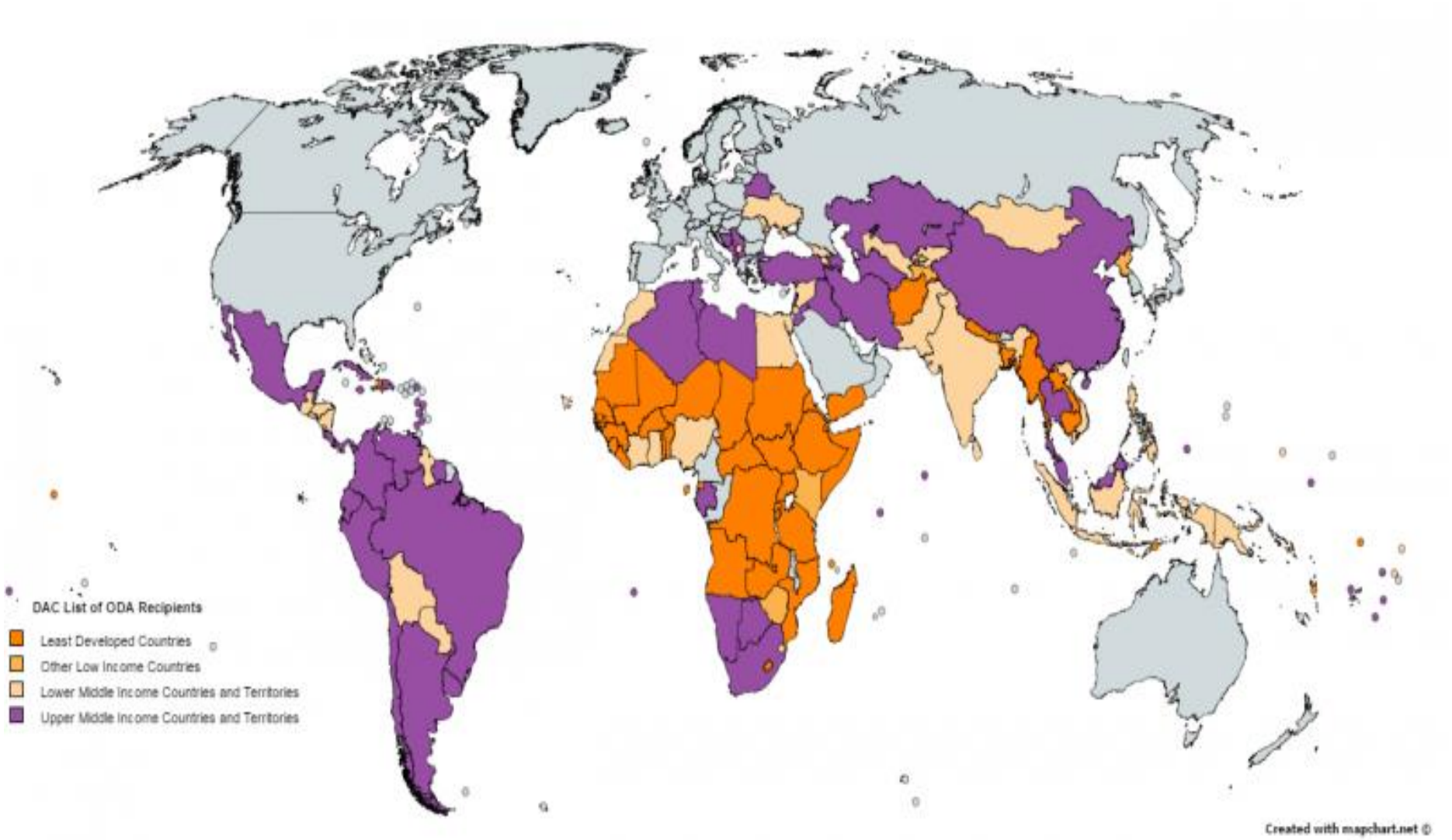
OECD DAC Country List



Pathway to impact
Official Development Assistance

OECD

BETTER POLICIES FOR BETTER LIVES

IS IT ODA?

FACTSHEET - NOVEMBER 2008

This note helps donors to decide whether a particular expenditure qualifies as official development assistance (ODA). It supplements the Development Assistance Committee (DAC) Statistical Reporting Directives.

Further guidance on ODA eligibility of expenditures in the field of conflict, peace and security is available in the DAC's "ODA Casebook on Conflict, Peace and Security Activities."

IS IT ODA?

DAC Members occasionally request the Secretariat's view as to whether a particular expenditure should be reported as official development assistance (ODA). This paper outlines the reasoning the Secretariat uses to answer such enquiries, and discusses some specific cases. It should not be taken as a definitive guide to ODA eligibility, since only the DAC may determine such eligibility. Further details are provided in the Statistical Reporting Directives (available at *www.oecd.org/dac/stats/dac/directives*).

Official development assistance is defined as those flows to countries and territories on the DAC List of ODA Recipients (available at *www.oecd.org/dac/stats/daclist*) and to multilateral development institutions which are:

i. provided by official agencies, including state and local governments, or by their executive agencies; and

ii. each transaction of which:

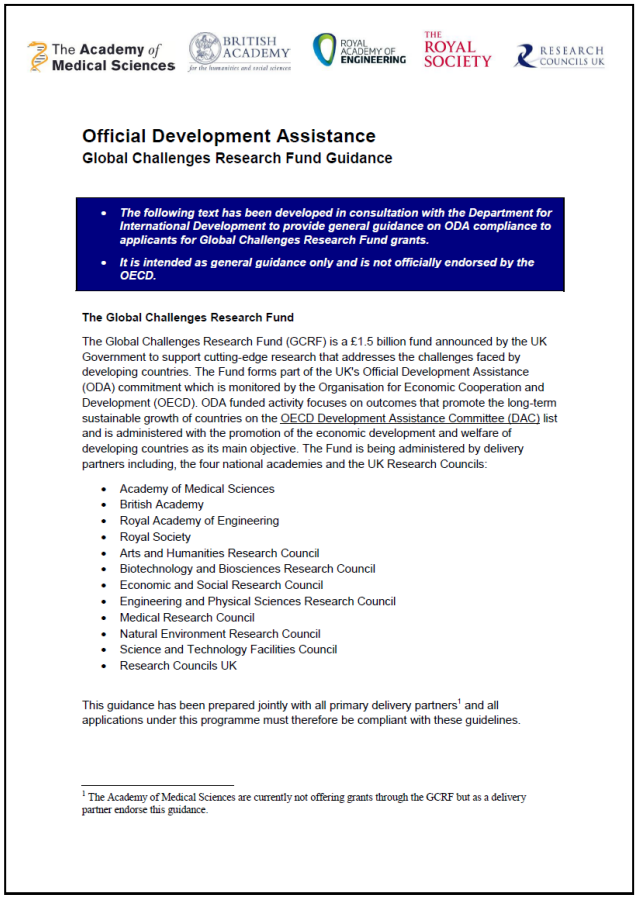
a) is administered with the promotion of the economic development and welfare of developing countries as its main objective; and

b) is concessional in character and conveys a grant element of at least 25 per cent (calculated at a rate of discount of 10 per cent).[1]

1. This calculation helps determine whether a loan is concessional. If the loan satisfies the ODA criteria, then the whole amount is reported as ODA. The grant element itself is not reportable as a flow. Reporting is on a cash (nominal) basis, except for Paris Club debt service reduction (see under "Flows" below).

www.oecd.org/dac/stats

IS IT ODA?



The Academy of Medical Sciences · British Academy · Royal Academy of Engineering · The Royal Society · Research Councils UK

Official Development Assistance

Global Challenges Research Fund Guidance

- ***The following text has been developed in consultation with the Department for International Development to provide general guidance on ODA compliance to applicants for Global Challenges Research Fund grants.***
- ***It is intended as general guidance only and is not officially endorsed by the OECD.***

The Global Challenges Research Fund

The Global Challenges Research Fund (GCRF) is a £1.5 billion fund announced by the UK Government to support cutting-edge research that addresses the challenges faced by developing countries. The Fund forms part of the UK's Official Development Assistance (ODA) commitment which is monitored by the Organisation for Economic Cooperation and Development (OECD). ODA funded activity focuses on outcomes that promote the long-term sustainable growth of countries on the OECD Development Assistance Committee (DAC) list and is administered with the promotion of the economic development and welfare of developing countries as its main objective. The Fund is being administered by delivery partners including, the four national academies and the UK Research Councils:

- Academy of Medical Sciences
- British Academy
- Royal Academy of Engineering
- Royal Society
- Arts and Humanities Research Council
- Biotechnology and Biosciences Research Council
- Economic and Social Research Council
- Engineering and Physical Sciences Research Council
- Medical Research Council
- Natural Environment Research Council
- Science and Technology Facilities Council
- Research Councils UK

This guidance has been prepared jointly with all primary delivery partners[1] and all applications under this programme must therefore be compliant with these guidelines.

[1] The Academy of Medical Sciences are currently not offering grants through the GCRF but as a delivery partner endorse this guidance.

"Research directly and primarily relevant to the problems of developing countries may be counted as ODA. The costs may still be counted as ODA if the research is carried out in a developed country."

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