



UK Agri-Tech Research: Opportunities for Collaboration with CGIAR Centres and Research Programmes

Background

1. DFID is a major donor of the CGIAR and has been instrumental in promoting a new Governance structure and encouraging the concept of greater links between CGIAR Centres and Advanced Research Centres around the world. . DFIDs objectives for its support to the CGIAR are set out in the Business Case published on-line (<http://projects.dfid.gov.uk/default.aspx>).
2. The Food Research Partnership (FRP) International Group identified the potential for better science linkages and partnerships through greater and more joined up interaction between the UK science base and the CGIAR as part of the UK Food Security programme.
3. BBSRC's strategic plan commits to seeking closer links and collaboration with the CGIAR and associated centres.
4. The National Institutes of Bioscience funded by BBSRC, and representing the largest element of UK Food Security programmes, have committed to developing improved research partnerships with CGIAR Centres.
5. The UK Global Food Security Programme is developing an international strategy which will include enhancing links with the CGIAR.
6. To follow up the FRP International Sub Group report a working group comprising representatives from BBSRC, GO-Science, DFID, the Global Food Security programme and UKCDS have met to define a series of actions which will lead to the enhancement of links and collaboration between UK and CG research programmes and institutions, building on the various UK interests.
7. Some good UK linkages have already been established with CGIAR Centres funded by BBSRC, DFID, NERC and others, but these do not reflect the totality of expertise in the community or realise the possible mutual benefits that can be achieved in furthering closer engagement with CGIAR research programmes and institutions.

UK Government Agriculture Technologies Strategy

8. The UK Government has published a UK strategy for agricultural technologies setting out how government and industry will build on the strengths of the UK sector to contribute to meeting the needs of consumers and food / non food producers worldwide, at a time of rapid population growth and climate change.
<https://www.gov.uk/government/publications/uk-agricultural-technologies-strategy>

9. The vision of the strategy states: *'That the UK becomes a world leader in agricultural technology, innovation and sustainability; exploits opportunities to develop and adopt new and existing technologies, products and services to increase productivity; and thereby contributes to global food security and international development'*.
10. The strategy will take advantage of the UK's world class plant, animal and environmental research base to improve global food security, whilst driving economic growth and protecting the environment.
11. The Agri-Tech Strategy intends to improve the translation and commercialisation of basic science into new technology and techniques. DFID has committed £10m to a technologies catalyst fund to assist this process. This would not only help enable countries worldwide to tackle the challenges ahead associated with food security, renewable energies and climate change, but would also leverage commercial benefits and contribute significantly to UK and global economic growth and impact of research in the UK.
12. The UK Government recognises there are significant opportunities for its research institutions to engage and collaborate with international counterparts, business and non-governmental organisations.
13. This short paper highlights the opportunities and rationale for UK collaboration with the CGIAR and its Research Programmes . It also seeks to define the purpose of developing such links and desired outcomes.

CGIAR

14. CGIAR research is dedicated to reducing rural poverty, increasing food security, improving human health and nutrition, and ensuring more sustainable management of natural resources. The 15 Research Centres that belong to the CGIAR consortium are very different not only in their areas of interest, research priorities, research infrastructure and their opportunities to access genetic resources but also their size and financing. They work in close collaboration with hundreds of partner organisations, including national and regional research institutes, civil society organizations, academia, and the private sector.
15. CGIAR centres are shifting to a programmatic approach aimed at strengthening collaboration for greater efficiency and development impact. The CGIAR Research Programmes (CRPs) intend to foster a range of stronger and more dynamic partnerships with amongst others, advance research institutions, which will generate high-quality research outputs while strengthening the capacity of national research institutions. Annex 1 overviews CGIAR, its Centre and the CRPs.
16. A multi-donor trust fund (of which DFID is a important contributor) finances research carried out by the hosting Centres through the CGIAR Research Programs. Fund Donors may designate their contribution to one or more of three funding "Windows" (see Table 1). :At present only around 40% of committed funding goes through the



Windows 1 and 2 mechanisms that fund the CRPs. The Fund Council will consider, two years after the establishment of the CRPs, the use of Window 3 for bilateral funding agreements to specific Centres for the remaining 60%.

17. Table 1. CGIAR Funding Windows

Window	Description
1	The least restricted type of funding. The Fund Council sets overall priorities and makes specific decisions about the use of Window 1 Funds such as allocation to CGIAR Research Programs (CRPs), payment of System Costs and any other use required to achieve the CGIAR mission;
2	Designated by Fund Donors to one or more specific CRPs. For each approved CRP, a sub-account is created to which donors may allocate funds. Once Window 2 funds are allocated to a given CRP, they flow to the Lead Center implementing the CRP
3	The most restricted type of funding, consisting of funds that Fund Donors wish to allocate to specific Centers. Neither the Consortium nor the Fund Council makes decisions about the use of Window 3 funds.

UK partnership opportunities

18. There is wide recognition that research targeted at avoiding global food insecurity through sustainable intensification and other approaches needs much greater international collaboration both between research centres and funding agencies and on a multidisciplinary basis. The UK has a world class environmental and life-sciences research base that is developing innovative sustainable intensification approaches to address global food security. Its Advanced Research Centres have skills and resources that can make significant scientific contributions to global food security. The component parts are becoming much more integrated aided by new partnerships such as between BBSRC and DFID and this is beginning to enable the UK to offer a joined up approach in key strategic areas such crop improvement, crop protection and animal disease.
19. The global nature of the multidisciplinary CGIAR and related programmes provides a wide range of opportunities to enhance impacts through new research and funding collaborations and mutual capacity building of the UK participants and partners. Understanding where UK research skills and resources can add value to the CRPs and develop mutually beneficial outcomes is important.
20. Joining up research strategies in key areas and promoting greater research collaboration with the CGIAR Centres and the CRPs will increase access to and partnership with other international advanced research institutes and national agricultural research organisations, thus offering the opportunity for excellent, cutting edge science and much needed research capacity building for both UK and collaborating country research scientists.

Maximising the UK's science and innovation collaboration with CGIAR Research Centres and CRPs

21. The working group has developed an initial action plan as outlined below:



- i) Improve the awareness in the CGIAR system of what the UK has to offer and vice versa.
 - ii) Promote a collaborative approach between key UK centres with a view to strategic partnerships with selected CRPs and Centres.
 - iii) Discuss opportunities for a joint UK –CGIAR partnership scheme to fund collaborations, workshops and fellowships.
 - iv) Improve links between UK representatives involved in CGIAR governance and research links and to share information on planned developments.
 - v) Undertake a mapping and scoping exercise to:
 - a. Identify existing UK collaborations with CGIAR CRPs and their nature.
 - b. Identify UK research skills and resources of real international strength that can be mapped onto the Research Centre Programmes and the CRPs.
 - c. Agree science and innovation areas of priority for the UK - CGIAR collaboration that yield high quality research, innovation and growth (informed by the BIS, DFID, Defra Agri Tech Strategy).
 - d. Identify how existing or new research funds might be utilised to facilitate greater UK engagement in CGIAR.
22. This information will be developed into a collaboration and action plan by the working group, with the intention of working to deliver the objectives of the UK Agri Tech Strategy and as a means to help support the delivery of the DFID and Global Food Security Strategies.

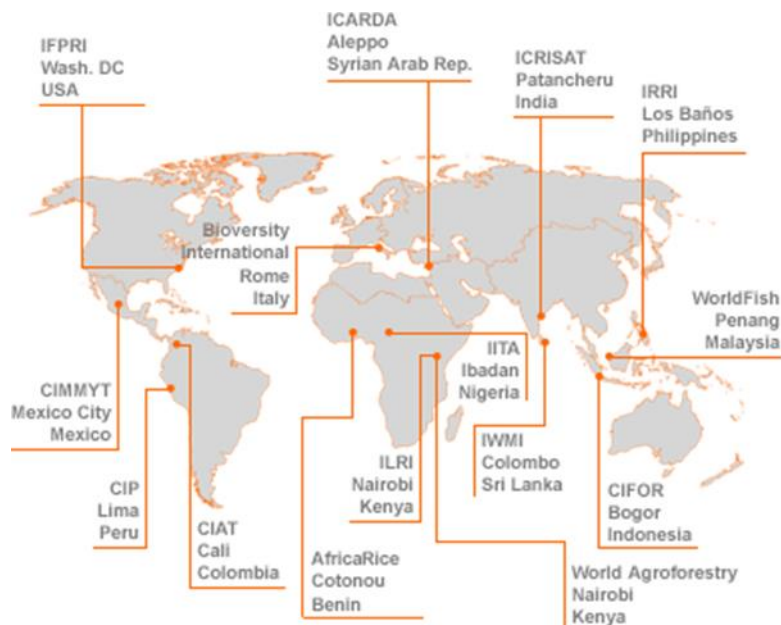
Annex 1

UK Research Collaboration and the CGIAR and its Research Programmes

The CGIAR is a strategic alliance of countries, international and regional organisations, and private foundations supporting 15 international agricultural centres, that work with national agricultural research systems and civil society organisations including the private sector.

A different partnership model between donors and researchers was established in 2010. The CGIAR Fund aims to improve the quality and quantity of funding by harmonising donor contributions, while a new CGIAR Consortium will unite the centres under a legal entity that provides the Fund with a single entry point for contracting centres and other partners to conduct research. CGIAR centres are shifting to a programmatic approach aimed at strengthening collaboration for greater efficiency and development impact. Details of the CGIAR Centres can be found at <http://www.cgiar.org/cgiar-consortium/research-centers/>

The CGIAR Research Programmes (CRPs) are listed in Table 1. CGIAR intends to use these to foster stronger and more dynamic partnerships, which generate high-quality research outputs while strengthening national research institutions.



UK Collaboration

DFID is one of the founding members of the CGIAR and continues to provide funding. DFID's engagement with the CGIAR has been to

CGIAR Vision and Strategic Objectives

The Vision:

To reduce poverty and hunger, improve human health and nutrition, and enhance ecosystem resilience through high-quality international agricultural research, partnership and leadership.

The Objectives:

- Food for People: Create and accelerate sustainable increases in the productivity and production of healthy food by and for the poor.
- Environment for People: Conserve, enhance and sustainably use natural resources and biodiversity to improve the livelihoods of the poor in response to climate change and other factors.
- Policies for People: Promote policy and institutional change that will stimulate agricultural growth and equity to benefit the poor, especially rural women and other disadvantaged groups.

improve its effectiveness in terms of poverty reduction and gearing towards the achievement of Millennium Development Goals. DFID actively participates in the governance systems of the CGIAR and has supported the reform programme.

Partnerships with CGIAR have facilitated access for UK researchers to national agricultural institutions in low and medium income countries. Some UK research institutions have long established links. Collaborations feature in recent BBSRC/DFID programmes such as SARID and CIDLID. A number of specialists have advisory or expert roles within the CGIAR system.

Without public investment in CGIAR international agricultural research

- world production would be 4-5% lower
- developing countries would produce 7-8% less food
- world food and feed grain prices would be 18-21% higher
- 13-15 million more children would be malnourished
- For every \$1 invested in CGIAR research, \$9 worth of additional food is produced in developing countries, where it is most needed.

Future Opportunities

The CRP cross-cutting themes may provide new funding and partnership opportunities for UK funders and research institutions to develop collaborative or complementary programmes and to generate high quality outputs. Collaboration with the CGIAR Centres together with other international advanced research institutes and national agricultural research organisations will offer the opportunity for excellent, cutting edge science and much needed research capacity building. The CRPs and their lead centre are listed below. The status of the CRPs can be found at http://www.cgiarfund.org/research_portfolio (accessed 26/3/13)

CGIAR Research Programmes (CRPS)	Lead Centre
Integrated Agricultural Production Systems for the Poor and Vulnerable in Dry Areas	ICARDA
Integrated Systems for the Humid Tropics	IITA
Harnessing the Development Potential of Aquatic Agricultural Systems for the Poor and Vulnerable	Worldfish
Policies, Institutions, and Markets to Strengthen Food Security and Incomes for the Rural Poor	IFPRI
WHEAT-Global Alliance for Improving Food Security and the Livelihoods of the Resource-poor in the Developing World	CIMMYT
MAIZE - Global Alliance for Improving Food Security and the Livelihoods of the Resource-poor in the Developing World	CIMMYT
GRiSP - A Global Rice Science Partnership	IRRI
Roots, Tubers and Bananas for Food Security and Income	CIP
Grain Legumes: enhanced food and feed security, nutritional balance, economic growth and soil health for smallholder farmers	ICRISAT
Dryland cereals: Food Security and Growth for the World's Most Vulnerable Poor	ICRISAT
More Meat, Milk and Fish by and for the Poor	ILRI
Agriculture for Improved Nutrition and Health	IFPRI/ILRI



Water, Land and Ecosystems	IWMI
Forests Trees and Agroforestry: Livelihoods, Landscapes and Governance	CIFOR
Climate Change, Agriculture and Food Security	CIAT