

DFID
Research Funding Framework
2005 - 2007

TABLE OF CONTENTS

Summary	3
Introduction	3
The challenge	4
The achievements of the past	5
A commitment to research	7
The future programme	8
Key researchable problems	9
Research capacity in developing countries	13
Getting research to users	14
Long-term directions	15
Annexes	
Annex 1: Consultation process	17
Annex 2: Practicalities for bilateral research programmes	18

SUMMARY

1. This is DFID's funding framework for Central Research over the next three years. It has been revised in the light of comments received during public consultation in May and June, for which we are grateful. Further details are available in Annex 1 and on DFID's website (www.dfid.gov.uk).
2. New science and ideas are crucial for the achievement of the Millennium Development Goals, but global research funding is insufficient to match needs. Many innovations require an international scale of research effort. DFID's Central Research Department commissions research to help fill this gap, aiming for tangible outcomes on the livelihoods of the poor.
3. The Central Research Department spent £82 million in 2002/03. This is increasing significantly; the budget will be at least £100 million in 2006/07. Confirmed figures for 2006/07 and 2007/08 will be published in early 2005, as part of DFID's overall budget plans for those years.
4. The strategy builds upon the considerable strengths of our current programmes. A review in 2002 showed that much of DFID's research effort is having a positive impact. Planning and consultations in 2003 showed that we should carry forward a similar range of programmes, in some cases at higher levels of funding. In two cases – DFID-funded programmes on renewable natural resources and engineering – we will wait before taking major decisions on future research, in order to benefit from the major evaluations during 2004.
5. We will reorganise some two-thirds of our research funding to focus on four big research themes: sustainable agriculture especially in Africa; killer diseases; where states do not work for the poor; and climate change. The rest of the funding will be spread over a wide range of themes, some identified here and some which will emerge during the life of the strategy. These themes capture most of our ongoing research commitments, and allow some new ones to emerge. We also hope to retain a 'responsive' programme, to provide small grants for ideas originating from researchers.
6. Increased funding allows us to build on ways of working that have been particularly successful, and particularly efficient. We will give more effort to building developing country research capacity, and to disseminating existing research ideas. We will look to work jointly with others, especially through further support to international initiatives, Public Private Partnerships, and a UK Funders Forum that will allow us to work more closely with other UK institutions funding research on international development.
7. This framework sets priorities for the next three years¹ and indicates the longer-term directions of the programme. It will evolve over time, with DFID's new Chief Scientific Adviser playing a key role. The process for accessing new funding is outlined in Annex 2.

INTRODUCTION

8. This paper is about the long-term research that DFID funds: research that contributes to a global pool of new knowledge and technologies for development. A wide variety of users in developing countries draw ideas from that global pool. The paper includes ways of improving their access, and so raising the impact of the research that DFID funds.
9. This paper does **not** cover some related areas:
 - Shorter-term analysis undertaken by DFID's Policy Division teams²
 - The ways that DFID staff themselves draw on the global pool of knowledge in order to make good decisions. That is largely a matter for DFID's professional networks, and the Information Division
 - The priorities of DFID offices in developing countries, which are set by Country Strategy Papers – although within those priorities Central Research Dept will work with country offices to facilitate the transfer of research
 - Unearmarked support to UN and other major international institutions, who in turn fund research as a small part of their work.³

¹ We recognise the need for sustained support. Although the framework covers a three-year period, the commitments made during this framework will cover a longer time frame.

² Though Central Research Dept (CRD) must work closely with Policy Division teams.

³ CRD will relate to these organisations (such as the WHO) where appropriate. This paper **does** cover international organisations, such as the CGIAR, whose main function is research.

THE CHALLENGE

10. Knowledge and resources are the two great weapons against poverty. The government is promoting a global effort to provide more resources to developing countries fighting poverty, and increasing British aid to contribute to that. This strategy covers knowledge – DFID’s centrally funded research, which helps generate and transfer knowledge to help developing countries reduce poverty.
11. There are vital problems for which developing countries need better solutions. Malaria kills 3000 people every day and resistance to existing remedies is rising rapidly. There is no vaccine against HIV/AIDS. We do not have adequate high-yielding, drought-resistant crops appropriate for the diverse and rapidly changing eco-systems of Africa. We do not have a clear view of what kind of approaches work to reduce conflict in very different political contexts.
12. There are some areas where we **do** have answers, but these answers have not yet reached the poor. Two-thirds of deaths are from illnesses that we know how to cure. Most Kenyan farmers still use seed varieties that are 20 years old. We need much better links between researchers and users – not just discoveries, but innovations that are actually used. We also need research into **why** the answers don’t get through – why health services often don’t work – why farmers don’t use modern crop varieties – and what can be done in different political circumstances to change this.
13. Resources spent on reducing poverty in developing countries are woefully inadequate. We and developing countries need to make choices as to how to allocate limited resources. Research is recognised worldwide as key to progress. In OECD (Organisation for Economic Cooperation and Development) countries the private and public sectors invest heavily in science and technology. In United States private research investments have tripled in the last 15 years, to \$180 billion per year.⁴ But there is an international shortfall in funding that leads to poverty reduction. Very little private research focuses on developing countries. This is partly because poor people do not generate the necessary demand to buy the products, and because the cost of entering the markets can be high. A significant technological divide is emerging between OECD and low-income countries, illustrated by the so-called ‘90:10 gap’ in health in which only 10% of the world health research budget of \$50-\$60 billion is spent on the diseases that affect 90% of the world’s population.⁵ Likewise, the ‘big five’ agricultural research multinationals spend \$7.3 billion per year on agricultural research – more than eighteen times the entire budget of the public sector Consultative Group on International Agricultural Research (CGIAR).⁶

⁴ *Science and Engineering Indicators, 2002*

⁵ World Development Report 2000/01: 182. The power of markets is such that over 46 times more money is spent on Viagra than on the development of new tuberculosis drugs (Medecins Sans Frontieres 2001, *Fatal Imbalance: The Crisis in Research and Development for Drugs for Neglected Diseases*).

⁶ The ‘big five’ are Bayer, Dow Agro, DuPont, Monsanto, and Syngenta.

THE ACHIEVEMENTS OF THE PAST

14. Research, the process that generates new technologies and ideas, is one of the driving forces behind gains in human development and poverty reduction during the last three decades. Important discoveries have included:
- *Vaccines* against smallpox (the largest cause of mortality in children in the early half of the 20th century), polio and a range of other childhood diseases, which have greatly increased life expectancy
 - *Oral re-hydration therapy*, which has saved the lives of millions of infants suffering from diarrhoea. The re-hydration therapy costs just 10 cents. Before, the standard treatment was an intravenous drip, at a cost of \$50 per baby. Technologies like these enabled child mortality levels to drop in countries where income growth was stagnant or negative. Even in the world's 40 poorest countries, infant mortality fell by a third between 1960 and 1990
 - *New crop varieties, pesticides and fertilizers* have led to a threefold increase in crop production in developing countries since the early 1960s. New rice varieties introduced to India in the 1970s are credited with marked increases in growth and reductions in poverty there. Analysis of nearly 300 studies of agricultural research showed an exceptionally high average rate of return of 73%
 - Social science research can be equally important, both in influencing policy – such as on user fees for education – and steering technologies.
15. DFID has provided substantial support to research over the years. Total spend on knowledge and research is currently 4% of the development budget, placing DFID in the top three bilateral research donors. The main existing research programmes are summarised in Table 1.

Table 1. Current DFID research programmes

<p>Rural</p> <p>CGIAR (Consultative Group on International Agricultural Research)</p>	<p>The principal global agricultural research effort for poverty reduction with an annual budget of £220 million and 15 international centres (13 of which are located in developing countries). The centres have produced over 500 improved rice, wheat and maize varieties that have doubled food production in developing countries. DFID's membership has increased the poverty focus of the CGIAR and the emphasis they give to capacity building. Regular independent evaluations.</p>
<p>DFID Renewable Natural Resources Research</p>	<p>Eleven-year programme, independently managed by ten UK managers for crops, livestock etc, each with a portfolio of projects. Outputs include the development of environmentally sustainable methods of production tailored to suit local environments. Takes research through to promotion to end users. Involves users and developing country researchers. Evaluation scheduled for 2004.</p>
<p>Policy Research Programme</p>	<p>A mix of short and long-term research programmes that support rural livelihoods. Works closely with country offices and policymakers to integrate results into policy processes. Evaluated in 2002.</p>
<p>Health</p> <p>Public-private partnerships</p>	<p>International not-for-profit research programmes to develop new health technologies using knowledge and resources of the public, private and philanthropic sectors. DFID supports four, including Medicines for Malaria and International Aids Vaccine Initiative.</p>
<p>Other international collaborations</p>	<p>Multi-donor funding of the Initiative for Maternal Mortality, the International Centre for Diarrhoeal Disease Research, and a trial of Vitamin A's effects on maternal mortality.</p>
<p>DFID Health Knowledge Programmes</p>	<p>Fifteen programmes on specific diseases or issues, with developing country partners and links to policy formation in-country. Impact examples include making oral-rehydration more effective in treating diarrhoea, and ways of spreading insecticide-treated bed nets for the control of malaria. Regular evaluation cycle.</p>

THE ACHIEVEMENTS OF THE PAST

Medical Research Council	Concordat, providing DFID contribution to much larger funding for research onto specific diseases. Evaluated in 2002.
Social science DFID Development Research Centres	Eight five-year policy research programmes run by consortia of UK and developing country institutions. Impact includes the Chronic Poverty Report launched by the Chancellor of the Exchequer and Secretary of State for International Development in May 2004. Regular evaluation cycle underway.
International collaboration	Support to World Bank and UN research
DFID responsive programme	A number of small (£100,000-£300,000) projects funded in response to researchers' ideas.
Engineering DFID Engineering Knowledge and Research programme	Six portfolios managing a total of 187 projects in different areas, such as transport and water. Programmes range from the impact of transport and rural road access on HIV/AIDS, through to the development of improved road surfaces in Cambodia.
Education DFID programme	Around 50 projects that range in size from £50,000 to £300,000. Examples of impact include change in language policy for education in Zambia.

16. DFID's centrally funded research programme was reviewed in 2002 by a team of external consultants and DFID staff. Their report, *Research for Poverty Reduction*, concluded overall that DFID's central research funding
- had a large impact on reducing poverty,
 - was generally of high quality,
 - and gives credibility to DFID in influencing the development agenda.
17. Our programmes are having significant impact. A public-private partnership is about to test a new combination of drugs against malaria. A collaboration with the Medical Research Council is about to test a microbicide aimed at protecting women against HIV/AIDS. In East Africa, cassava mosaic disease threatened the livelihoods of 20 million people before researchers produced disease-resistant varieties. And local clays, bricked and fired by waste rice husk, are proving effective for road pavements in Vietnam and Cambodia.

A COMMITMENT TO RESEARCH

18. In light of this evidence we will substantially increase our funding of development research. We anticipate that the 2006/2007 budget will be at least £100 million compared with the 2002/03 spend of £82 million. Confirmed figures for 2006/07 and 2007/08 will be published in early 2005, as part of DFID's overall budget plans for those years.

19. This expansion of funding for research reflects:

- The need for an increased effort to solve the problems of developing countries: new problems need new knowledge, whilst unsolved problems need fresh looks and new approaches,
- The Government's wider commitment to science and technology ⁷ and
- The commitment in the 2000 White Paper to 'seek to increase public and private sector research for development, including through new mechanisms.'

⁷ Set out in the Crosscutting Review of Science and Research, 2002, and by the Chancellor of the Exchequer in his speech on 27 January 2004.

20. The 2002 review *Research for Poverty Reduction* found that many of our current research programmes are having a positive impact. This strategy therefore includes important elements of continuity, maintaining existing approaches, building on past successes and expanding areas of high priority and potential (see paragraph 40).
21. The 2002 review also identified a number of areas where we could increase the effectiveness of DFID funded research. Specific recommendations include:
 - Bring all research (previously managed in sector programmes, such as health, natural resources) together under a Central Research Department, in order to eliminate duplication and to generalise across DFID research the best practice from the different current strands
 - Focus on **key researchable problems**, and bring to bear whatever combination of disciplines are needed to tackle them
 - Give more support for **developing country research capacity**
 - Give more attention to **getting research into use**
 - **Position DFID's research in its broad international context**, rather than imagine it as a stand-alone programme
 - **Expand international funding**, the attention we pay to the **private sector**, and increase our **collaboration with other UK government support** to research.
22. The funding framework provides sufficient space to take on board these recommendations while carrying forward current successful programmes. In the following sections we outline the immediate priorities for the research programme (**key researchable problems**). We highlight the links between these research problems and existing programmes, and at the same time identify new areas of research. The following sections also describe new areas of work that will increase the impact of our research, namely **developing country research capacity**, and **getting research into use**. The paper ends with a review of some of the **new directions** for the programme that we will be exploring over the forthcoming years.

KEY RESEARCHABLE PROBLEMS

23. All DFID's efforts are directed towards achieving the targets set by the world community in the Millennium Development Goals by 2015. They are the basis for choosing research topics – though research's long-term focus requires a look at the priorities and issues beyond even 2015. DFID's objective for research is therefore:

'To promote the production and uptake of technologies and policies that will contribute to poverty reduction and the achievement of the Millennium Development Goals.'

24. The central issue for this funding framework is the allocation of resources between key researchable problems. The present process for identifying topics is inadequate, with too little consultation with developing countries and research users. In the section on **Future Directions** we describe how we will seek to promote a better **international** process to identify priorities, but this will take time to put in place. As an interim measure, we have used a rapid consultative process to select topics for commissioning new research in the year 2005/2006 and 2006/2007. The consultation process is described in Annex 1. The priorities derived through this rapid consultation allowed us to avoid any interruption to research commissioning in the short-term, and to ensure that no momentum is lost in achieving an impact on poverty.
25. The process identified four key researchable problems, to which DFID will devote about two-thirds of research funding. These are considered in turn below, together with the main means of addressing them.⁸

The Millennium Development Goals

1. Halving the proportion of people in extreme poverty and suffering hunger between 1990 and 2015
2. Achieving universal primary education by 2015
3. Eliminating gender disparity in education in 2015
4. Reducing by two thirds, between 1990 and 2015, the under-five child mortality ratio
5. Reducing the maternal mortality ratio by three-quarters by 2015
6. Halting and beginning to reverse the spread of HIV/AIDS and the incidence of malaria and other major diseases by 2015
7. Ensuring environmental sustainability, halving the proportion of people without sustainable access to safe drinking water and sanitation by 2015, and significantly improving the lives of at least 100 million slum dwellers by 2020
8. A global partnership for development

Sustainable Agriculture especially in Africa ⁹

26. Whilst for developing countries as a whole, per capita agricultural production increased by about 40% between 1980 and 2001, in sub-Saharan Africa it fell by about 5%. It is crucial to reverse this trend if we are to address the Millennium Development Goals (MDGs) on hunger, poverty and health. World research has paid inadequate attention to the crops,¹⁰ livestock and ecology of these regions, but the CGIAR and DFID's previous research has shown that much can be achieved. The focus will be on Africa, but research can also extend to other rain-fed areas which have not benefited from the green revolution. Three intertwined approaches are needed: (i) **participation**: working with poor farmers to identify and tackle their key problems, which could include, for example, problems such as poor market access, or post-harvest losses, or inadequate seed varieties, or losses of up to 20% of livestock per year ; (ii) **technology**: develop new technologies and practices, such as high-yielding, disease/pest tolerant varieties for the crops that poor people grow in different kinds of marginal, rain-fed areas, new cultivation techniques that conserve soil and water, and drugs and vaccines that improve the health status of poor people's livestock; (iii) **access**: systems which enable poor people to hear about and choose from appropriate technologies, and a better understanding of the political and institutional factors that promote or inhibit the use of new ideas.

27. DFID will:

- Double funding for the CGIAR, to £20 million per year, as announced in January 2004. We will engage very actively with the CGIAR to promote its focus on the poor, and will support reform to strengthen it
- Use the 2004 evaluation of DFID's own eleven year Renewable Natural Resources Research Strategy (RNRRS) to identify the most promising ways forward, and promote those lessons internationally
- Commission substantial new DFID programmes that build on the successes of the previous ten RNRR programmes
- Promote a public-private partnership to develop vaccines against common livestock diseases, and investigate the potential for partnerships in other areas, particularly those that involve small and medium sized enterprises
- Support international collaborations in this area.

⁸ Detail on each theme will be developed in due course through further scoping work that maps out the range of other players engaged in the subject area, builds on lessons of best practice established through existing programmes, and identifies gaps in current knowledge.

⁹ Agriculture is defined in its widest sense and includes forestry, fisheries, livestock and wildlife.

¹⁰ Crops include cereals, legumes and vegetables

Killer diseases

28. It is projected that 70 million people will have died of HIV/AIDS by 2020. The impact will be magnified by associated social and economic upheavals, as key workers are lost and family structures are weakened. TB and malaria together claim nearly the same number of lives as HIV/AIDS, and lead to debilitating illness for millions more. TB now infects one-third of the world population, and is the leading cause of death for people in their most economically productive years. New treatments, diagnostics and vaccines are urgently needed to control the disease. Another need is to develop prevention and safe treatment against malaria for children and pregnant mothers, nearly a million of whom die of the disease each year, and to improve poor people's access to existing treatments. One-third of the world's population does not have access to essential medicines; in the poorest parts of Africa and Asia this figure rises to one-half.
29. DFID will:
- Promote and seek to rationalise key public-private partnerships and multi-donor collaborations, especially those aimed at:
 - Microbicides for women to use to protect themselves against HIV/AIDS and sexually-transmitted diseases: even a partially effective product that reaches a limited number of women worldwide has the potential to avert nearly three million infections in just three years
 - HIV/AIDS vaccines: although this is a high-risk area, because the science is very difficult, the benefits would be enormous
 - Drugs and vaccines against malaria. This will include collaborative funding with the Wellcome Trust
 - TB treatments, vaccines and diagnostics
 - Commission new DFID-funded programmes in these areas, drawing on the experience from existing Health Knowledge Programmes
 - Commission new DFID-funded programmes, and promote multi-donor collaboration, on new approaches to delivering services to poor people, particularly improving access by women, children, and the most vulnerable groups. This will include ways of improving accountability of services; improving the availability and capacity of health workers; and improving access to services, including issues of pricing and, sustainable financing; and the role of the private sector. Throughout, this will draw on the experience of existing DFID Knowledge Programmes
 - Promote a range of research on HIV prevention and treatment, and on the social impact of HIV/AIDS, in the light of the Government's strategy on tackling HIV/AIDS in developing countries announced in mid-2004.

Where states do not work for the poor

30. Nearly 60% of poor people outside of India and China live in states affected by conflict or failing institutions. In many countries, public services do not work, states struggle to manage social tensions, and governments fail to secure broad and sustainable development for their citizens. The evidence increasingly suggests that weak states represent both (i) the biggest challenge to achieving the MDGs, and (ii) the greatest potential for increased global conflict and instability. We urgently need research both on how we can best promote effective states, and on how poor people's needs can be met by non-state structures. We seek policies and strategies that work within the political reality of failing states.
31. DFID will fund research which builds on the work of four ongoing Development Research Centres: one on the state itself, one on how citizens can develop the ability to participate, one on how states respond to crises, and one on ethnicity, inequality and conflict. Important issues that require further work include how citizens can hold states accountable; ways in which communities can come together to provide the goods and services they need while ensuring environmental sustainability; strategies for managing crises and potential conflict; understanding the international factors that facilitate or trigger poor performance; understanding how to transform war economies; understanding better the factors that promote or undermine human security; and the dynamics of change – what trends are likely, and how might they be influenced. This is an agenda that is changing fast, and additional research may be commissioned over the next few years.

Climate change's impact on poverty

32. Little existing research on climate change is focussed on poverty impacts. Rainfall is predicted to decline by 200 mm per year by 2080 in Southern Africa. Almost everywhere the climate will become much more variable. Most obviously, this will influence crop production: poor people need new varieties, cropping and husbandry systems that are better able to tolerate variability and drought. However, the implications go much wider – for example, to water management and the planning of infrastructure; to public health policy; to energy policy; to disaster risk reduction and the need for more emergency support to help poor people cope with the consequences of more frequent droughts and floods; long-term operational data handling and assessment (local and global); and to what might be possible where government structures are weak.

KEY RESEARCHABLE PROBLEMS

33. Working closely with the DFID Global Local Environment team, we will carry out scoping work on the implications of climate change during 2004, (i) to establish what developing country players regard as the most urgent research needs, and (ii) to identify what research other funders are supporting. The scoping work will allow us to build upon the very considerable body of knowledge on climate change issues, and research underway with funding from elsewhere. It will help us identify areas of research where we can add the greatest value, by either filling gaps or co-financing existing programmes that would benefit from more money.

Interdisciplinary research

34. An understanding of the social and political contexts in which new technologies and ideas are to be used is essential. An interdisciplinary approach, involving social, political and institutional research, will be used to address these four problem areas. Gender and education issues will also need to be addressed by all four themes. Education, for example, plays a key role in increasing sustainable agriculture in Africa, in preventing/treating killer diseases, and in making states work better for the poor. Research that addresses the links between the four themes, such as for example, the impact of HIV/AIDS on the functioning and legitimacy of the state, will also be considered.

Other researchable issues

35. The remainder of DFID's central research funding for 2005/2006 will be spread over a range of issues.
36. The consultation process [see Annex 1] identified fourteen further areas on which DFID will seek proposals for new or extended research programmes starting in 2005. Table 2 below lists them, and the Millennium Development Goal they relate to.
37. These are some of the crosscutting and stand alone topics identified so far. Some are a continuation of existing programmes, whilst others represent new areas of work. Additional topics are expected to emerge through the lifetime of this strategy, not least through further discussion with DFID policy teams and regional policy departments. We will retain the flexibility to take on new research themes in the future.
38. Areas of research where we have yet to take a decision include renewable energy, water and sanitation. We recognise that better access to these services will be essential to the achievement of the MDGs. More people die from water and sanitation related diseases, especially diarrhoea, than malaria. We have a long history of research in these areas through our Engineering Knowledge and Research programme (EngKaR). Our future research efforts will be guided by the evaluation of these investments, and by scoping work to determine where new knowledge is needed.¹¹

Table 2. Additional research areas

MDG	Indicative research outcomes
1. Income poverty & hunger	<ul style="list-style-type: none"> • New understanding on which policies, rules and regulations best promote economic growth that benefits the poor <i>[new]</i> • New understanding on the role of production for different markets (domestic, regional and international) in stimulating economic growth in a globalised world <i>[further scoping]</i> • Better access to information on transport and infrastructure <i>[new]</i>
2. Education	<ul style="list-style-type: none"> • Improved education access, quality and outcomes <i>[new]</i>
3. Gender	<ul style="list-style-type: none"> • Understanding the factors that enhance women's empowerment <i>[new]</i> • Understanding how particular agriculture and health technologies affect the position of women <i>[cross-programme]</i>
4 & 5. Child and maternal mortality	<ul style="list-style-type: none"> • Strategies for improving maternal neonatal and child health • Strategies for improving reproductive health and HIV prevention, and implications for gender empowerment • Strategies for improving understanding of sexual and reproductive health and rights
6. Disease	<ul style="list-style-type: none"> • Mental health – better understanding of an under-researched area, important for the poor <i>[new]</i> • Tobacco use <i>[new]</i>
7. Environmental sustainability	<ul style="list-style-type: none"> • Natural resource management systems¹² that work for the poor – including some action research
Processes of change	<ul style="list-style-type: none"> • Chronic poverty: needs of the very poorest • Faiths in development <i>[new]</i>

¹¹ Including appropriate methods to bring about widespread, effective application of technologies.

¹² This topic would include governance systems around the management of forests and water.

KEY RESEARCHABLE PROBLEMS

39. DFID wishes to encourage innovative, bold research that challenges established thinking and practice. This applies across the portfolio. However, specifically to promote the diversity and innovativeness of research outputs, and to widen the number of institutions and researchers benefiting, we will maintain an annual bidding round for smaller policy-oriented projects (£100,000 to £300,000 each). These are ‘responsive’ in the sense that the topics will not be prescribed by DFID. However, such programmes have a high administration cost, and in order to make them cost-effective, we shall explore the possibility of collaboration with other UK funders such as Research Councils. We will ensure that such collaboration supports applied research, and involves a wide range of researchers, including universities, non-governmental organisations (NGOs), the private sector and developing country partners.

Relationship with ongoing research programmes

40. Our new research priorities capture much of our ongoing research, whilst providing opportunities for new areas of work (Table 3). Two of our larger programmes, in Renewable Natural Resources and in Engineering, are about to be evaluated. We will delay decisions in these areas so that we can take account of the evaluations to identify and build upon successes. The RNR programme has been extended by a year to allow us to do this, thus avoiding any loss of continuity in areas where we wish to maintain our investment.

Table 3. Relationship between new research agenda and ongoing research commitments

	£ million	
	Now	Indicative provisional plan
Renewable Natural Resources/Agriculture		
CGIAR (Consultative Group on International Agricultural Research)	10	20 (already announced)
DFID direct fund	20	Pending evaluation
Public-private partnerships (PPP)	0	Increase
Health		
PPPs	9	Increase
International	1	Modest increase
DFID direct fund	11	Modest increase
Medical Research Council	4	Same
Social science		
DFID direct fund	6	Modest increase
International	1	Modest increase
DFID fund in response to Researchers’ ideas	3	Same
Engineering		
DFID direct fund	10	Pending evaluation
Education		
DFID direct fund	2	Same

RESEARCH CAPACITY IN DEVELOPING COUNTRIES

41. The development of a science and technology base goes alongside economic growth: they contribute to each other. Likewise, developing country policy research can contribute to a climate of public debate that can make the state more effective and perhaps more receptive to the interests of the poor. To have sustainable impact in the long-term, we need to ensure that our support to research helps build scientific and policy capacity within developing countries.
42. Another reason for focus on developing country researchers, is that their involvement increases the chance of relevance and impact. A research project's impact on anti-poverty policy and technology delivery is usually rather diffuse and long-term.¹³ Links and networks between researchers and policy-shapers are all-important. So, for DFID's research to have an impact on developing country governments and other users, it must closely involve developing country researchers: they, rather than researchers from abroad, are more likely to interact with policymakers – even extending to researchers themselves becoming policymakers years later.
43. The quality of research capacity varies widely across the developing world: capacity is relatively strong in China and India, but weak in much of Africa.
44. DFID has useful experience of support to developing country research institutes. They are partners in much existing DFID research: for example, the eight social science Development Research Centres are all consortia with a majority of developing country members; DFID's Renewable Natural Resources Research programme commissioned 40% of its projects from developing country research institutes in 2001 and 2002. Capacity-building is a product of all DFID's long-term research programmes. The CGIAR centres, most of which are based in developing countries, spend 22% of their budget on support to national agricultural research systems. There are some excellent examples of success – for example recent Vitamin A trials in Ghana are establishing an infrastructure that can carry out other clinical trials. DFID country programmes may also directly support science and technology capacity-building, such as at the Kigali Institute for Science and Technology in Rwanda, the National Agricultural Research Institute in Brazil (building local forest management capacity), and the Tea Research Institute of Tanzania.
45. The first priority, especially for Africa, is the capacity to access both existing and new knowledge. The 2002 Review *Research for Poverty Reduction* goes so far as to give it priority over new research, 'the key capacities for creating innovation or improved service delivery [in developing countries] are likely to relate more to the improved flow and democratisation of existing knowledge than to new research results.'¹⁴ DFID co-funds a range of programmes to provide developing country researchers with free access to scientific literature, and to publish their own work. Nearer to the user, DFID is supporting the new African Agricultural Technology Foundation, a not-for-profit entity designed to facilitate the transfer of existing crop technologies to small-scale African farmers.
46. Yet where research capacity is weak, the main causes are not in fact specific to research. Rather, they affect the whole public sector: unreliable finance, poorly paid and managed staff, weak and unreliable infrastructure, sometimes a lack of security. Tackling these issues is central to DFID's wider work in such countries. DFID has moved away from funding stand-alone projects to working directly with governments and civil society to change these underlying problems. This will have the greatest impact on improving research in the long run, by maximising the prospect of creating capable and effective public institutions, which can make a sustained contribution over the long term.
47. Building capacity requires substantive and long-term investment. This can only be addressed on a significant scale by developing country governments and donors operating at a country level. DFID will be reviewing our overall support to science and technology, following the forthcoming appointment of the DFID Chief Scientific Adviser, and in the light of a report in autumn 2004 from the House of Commons Select Committee on Science and Technology. The Office of Science and Technology is preparing a report specifically on UK government support to scientific capacity building in developing countries. In the meanwhile, the Central Research Department will:
 - support DFID country and Regional departments wishing to pilot capacity building programmes These can include the capacity of developing country policy-shapers to use research
 - support international efforts to build capacity and strengthen research networks including initiatives that improve developing country researchers' access to knowledge, and the capacity of users to source, evaluate and utilise existing and new knowledge
 - promote the full involvement of developing country institutions and other local stakeholders in our research programmes. 'Proposals for capacity building' will be one of the criteria by which new research management contracts are assessed¹⁵
 - and investigate possibilities further, with other Government departments, and with other donors with greater expertise in capacity-building.

For example, CRD is working with DFID offices in Kenya and Malawi, to explore the possibilities of a programme on health research capacity funded jointly with the Wellcome Trust.

¹³ See evidence from major ongoing studies on research-policy links by IDRC (Canada) and ODI/Global Development Network. (www.rapid.org.uk).

¹⁴ The need for greater investment in communication has also been identified by the Millennium Project, Interim Report on Science Technology and Innovation.

¹⁵ The focus will be on the capacity of participating institutions, and may include formal (Msc/PhD) and informal training, and training for potential users of the knowledge generated.

48. The 2002 Review *Research for Poverty Reduction* singled out the need to link research with the take-up of ideas, so that results made a difference to the poor. DFID has been funding a major research programme on when and how research does have an impact on policy.¹⁶ The problem is not just dissemination of results. The image should not be a conveyor belt – first research, then report, then a policymaker will act. The process of take-up of research is not linear. Policymakers act according to their own timetables, and according to the changing political situation. Research has a general impact through creating common understandings, and more specific impact when there are good links between researchers and actors – so that policymakers know where to look when they want ideas, and researchers attune their research to high priority issues.
49. It is not just policymakers who need to know outcomes of research. Research needs to communicate with a wide range of other stakeholders, including NGOs, civil society and the private sector, who not only play an important role in stimulating policy debates, but are also key in delivering new knowledge and technologies to poor people.
50. The results of research are typically published in academic, subscription-only journals. It can be difficult for users in developing countries to access such material, either because journals are not available, or because the information is published in a language that makes it inaccessible to a non-scientific, or non-English speaking community.
51. The extent to which new knowledge is accessed and used by developing countries is strongly influenced by local capacity to access, use and deliver new knowledge. Measures to support that have been outlined in paragraph 46 above.
52. There is however much we can do within our programme to promote the use of new knowledge. We will pursue four lines to improve the impact of research:
 - (i) For research funded by DFID alone, we will establish procedures that promote inter-action with users; by involving users in the design, implementation and analysis of research, and by generating essential information that is presented in a digestible format. We will fund a wide range of communication channels to make sure the information gets across to potential users. Internationally, we will build on the *id21* website, which reports research in lay terms, and on DFID's past experience in publicising research results on radio, television and the press, such as the Hands On-Earth Report multi-media project, which combined traditional and new communications tools, and was broadcast on BBC World TV and News 24, to 275 million homes and households. The use of interactive data-bases or toolkits stored on CD-ROMs, can be another way in which developing country scientists can be provided with ready access to DFID research findings.¹⁷
 - (ii) As part of our research programmes, we will support synthesis reviews of available knowledge. Synthesis reviews that distil and evaluate available evidence can greatly facilitate objective decision-making by policymakers and technology users – many of whom are bombarded by a wealth of (often) conflicting information.
 - (iii) Building on our work with Food and Agriculture Organisation of the United Nations (FAO) and the World Health Organisation (WHO), we will support *international organisations* to improve their information services and systems, so that developing country users can easily access the whole global pool of knowledge in their field.
 - (iv) For most poor people, what matters is whether *local or national systems* deliver the benefits of research. In Uganda, Bangladesh and Bolivia, DFID has supported innovative ways of making national agricultural research systems more responsive to demand from farmers. We will investigate taking this further, by establishing an Action-Research programme to explore (a) the constraints to uptake of research by different user groups, and how to tackle them; (b) methods of generating effective demand for research; (c) the role of innovative communications techniques; and (d) a better understanding of the processes that underpin effective and sustainable pro-poor innovation systems, and how they can build effective relationships between researchers and users including policymakers, civil society, the media, general interest groups and the poor.

¹⁶ See note 13. The RINRRS also has a wealth of experience on factors that shape the uptake of new ideas.

¹⁷ We will ensure that appropriate methods of peer review and quality control are in place for research findings that are not published through academic, peer reviewed journals.

53. This paper has so far set out a framework for DFID's immediate actions over the period 2005/2006 to 2006/2007. In the longer term, there are five ways in which we need to make progress, if we are to maximise the impact of DFID's growing budget for centrally funded research on the achievement of the Millennium Development Goals:
- focus on the right research priorities
 - strengthen collaboration with other UK funders of research with application for developing countries
 - contribute to better coordination among research financiers internationally
 - strengthen links with the private sector
 - monitor and evaluate.

Choosing research priorities

54. It will be a major task for the first two years of the new strategy, to work with others in the international system to stimulate a better process to determine longer-term research priorities. We wish to promote the influence of poor people and developing country institutions as potential users of research – raising the 'demand-pull' for research, so that it is more relevant. We do not underestimate the size of the challenge, and we will need to develop our ideas on how to take this forward as we engage in the task. Our current proposals are to:
- Support an informal group of key research donors, seek better information on who funds what, and investigate the possibilities for a common cross-sectoral consultation process
 - Systematically use existing sectoral consultations – such as the Global Forum for Agricultural Research and its associated regional and sub-regional bodies (FARA, ASARECA etc.); the World Ministerial Meeting on Health Research; and developing country institutions such as the New Partnership for Africa's Development (NEPAD) (i) to hear what topics developing countries want, and (ii) to stimulate processes to set priorities that take into account user needs
 - Collate existing studies on demand, and commission new studies on priorities from southern institutions
 - Identify opportunities to use research in support of major international development initiatives (such as currently on HIV/AIDS).
55. DFID's research choices will also be informed by a **horizon-scanning** exercise across the whole of the DFID – to identify research and policy agendas by looking 10-20 years ahead. This will help avoid the risk of having time horizons which are too short, and of missing longer-term opportunities and threats. This is in line with approaches across the UK Government. It will be a particular concern of DFID's Chief Scientific Adviser. It will involve scanning emerging trends; identifying scenarios; and commissioning small research scoping studies. It will have a budget initially of £1 million per year.

British collaboration

56. Within Britain, there are opportunities for 'joining up' the full range of UK government support to research, to bear more directly on the fight to eliminate poverty. The Government has recently produced a ten-year Science and Innovation Strategy that, while aimed primarily to improve the UK's performance, could provide a base for the UK's contribution to global research priorities. Research councils and some other government departments fund research that is relevant to development. The Office of Science and Technology promotes collaboration across government, and itself identifies opportunities for example in LINK programmes. As noted above, it is currently sponsoring a consultancy on capacity-building in science and technology for developing countries.
57. DFID will:
- participate actively in Research Funders Fora on Health in Developing Countries, and on the Environment
 - call a UK Funders' Forum on International Development during 2005, to identify common opportunities with all Research Councils and other key UK funders
 - undertake more detailed consultations with Research Councils and other key funders, to explore where there could be opportunities for cooperation, and the appropriate mechanisms to take them forward, addressing issues of different missions, practices, criteria and procedures
 - engage in discussions on the Research Assessment Exercise (RAE), to examine if and how the impact of research can be taken into account when Higher Education Funding Councils are deciding their funding allocations to UK universities.

International collaboration

58. DFID is one funder in a broad field. Other actors include governments, the private sector, and not-for-profit Foundations. Bilateral donors are significant, but untied resources are limited: they often focus either on capacity-building in developing countries, or on research by institutions in their own countries. Multilaterals have a relatively small funding role.¹⁸ National governments, particularly among the larger developing countries (Brazil, China, India, Malaysia) are themselves key players both as funders and as partners for international agencies.

¹⁸ The World Bank chairs the CGIAR, and provides some capacity-building, but research funding is not a core function and is limited by the small size of the Bank's grant (as opposed to loan) budget.

59. At the moment, surprisingly little is coordinated. There is an international effort in agriculture, through the Global Forum for Agricultural Research (GFAR) and the Consultative Group (CGIAR);¹⁹ there is an annual forum on health research. Both are large marketplaces with a dominance of research suppliers rather than users. Parts of the UN system have something of an agenda-setting and convening role – for example the World Health Organisation – and DFID would like to see this UN role increased. Organisations such as the Water and Sanitation Programme, and Water Supply and Sanitation Collaborative Council promote best practice, but do not have the resources to finance or co-ordinate research. There are important ad hoc initiatives, such as the effort led by the Gates Foundation to create the critical mass of investment and research effort required to produce an HIV/AIDS vaccine. The International Forum of Research Donors for Development (IFORD) is a valuable place to exchange information. But there could be big gains by more coordination and harmonisation, particularly with the EU.
60. Research for Poverty Reduction emphasises that ‘DFID’s research effort should be seen as part of a collective international research effort.’²⁰ Some research should be funded collaboratively between a number of donors:
- because it is too high cost for any one donor to undertake; and/or
 - to increase the chance of uptake of the research, because an international effort will be more publicised and there will be more stakeholders committed to its implementation; a collaboration may also be seen by potential users as neutral rather than parti-pris; and/or
 - because there is, or could be, international political momentum to solve the problem at issue; and/or
 - because a respected international organisation has a cost-effective track record; and/or
 - to capitalise on the strengths of different partners, and avoid unnecessary duplication; and/or
 - to support developing country initiatives, without overburdening them with multiple funding channels.
61. Where these conditions apply, DFID will seek to support joint research funding in cases where we are satisfied that our participation and support can ‘add value’ to these international research efforts.
62. Collaboration does not mean uniformity. Research above all is an area which benefits from diversity. This has a number of implications:
- in the international field, we should support variety: for example, the UN’s World Institute of Development Economics Research as well as the World Bank’s Development Economics research programme.
 - DFID’s bilateral programme may support promising schools of thought that are under funded by others – for example, political science thinking that is not based on ‘rational choice’ theory, or economic analysis that is not based largely on cross-country econometrics.
 - Collaboration with other research funders should not lead to monopoly of approach.

Public-private partnerships

63. Increasingly, international collaborations involve the private sector. DFID has been a pioneer of such public-private partnerships, along with some not-for-profit Foundations such as the Rockefeller and Gates Foundations, and the Wellcome Trust. As *Research for Poverty Reduction* said ‘Strengthening the pro-poor focus and impact of research undertaken by the private sector creates a major opportunity for the strategic use of DFID’s resources.’²¹ This research framework has identified a number of areas – principally health and agriculture – where DFID will take forward or seek to develop public-private partnerships. We will promote the development and use of alternative financial instruments and other incentives to encourage private investment in pro-poor research.
64. We will consider other areas where public-private partnerships might be effective. We will also plan and implement a systematic evaluation of partnerships about types of cooperation: what works best for what circumstances.

Monitoring and evaluation

65. To be effective, research requires rigorous quality control. Monitoring and evaluation must be central to our programme management. There will be regular monitoring, to review research progress against both milestones and the underlying criteria for research, in order to ‘sunset’ research streams that have run their course. This will build on the positive experience of monitoring built up in DFID’s past programmes, extending it by greater DFID staff input. It will also address the issue of ensuring adequate baseline data against which programmes can be monitored and evaluated. We will use independent peer reviewers to select research projects and evaluate our programmes. The criteria will include likely effectiveness, as well as rigour: we will work hard to include NGOs and other researchers, avoiding over-academic formulation. The Chief Scientific Adviser and the Chief Economist will have important roles in overseeing quality control and providing advice. We shall also take the opportunity of co-location within the same Division to liaise closely with DFID’s Evaluation Department.

¹⁹ DFID is also very active in the EIARD European group that coordinates European policies on, and support for, agricultural research for development.

²⁰ Para 287.

²¹ Research for Poverty Reduction para 295.

Consultation process

1. In 2002, a review of DFID's research, *Research for Poverty Reduction*, was produced by a team that was half DFID staff, and half external experts, with a similarly mixed steering committee. In April/May 2002, they invited contributions, and received 42 responses broadly representative of all areas of research. The recommendations of the review were agreed by the Secretary of State in December 2002.
2. During the summer of 2003, six studies were conducted or commissioned on research instruments that *Research for Poverty Reduction* had recommended should be expanded. They were undertaken either by external consultants or DFID staff. 109 individuals were consulted. For example, Rand Europe conducted the study on DFID's role in the national research effort, and interviewed key informants in four Research Councils, and the Wellcome Trust. Rand Europe also did the study on DFID's role in the International Research Effort, for which they interviewed key informants in the Ford, Gates and Rockefeller Foundations, three bilaterals, and the World Bank and WHO. These studies are available on DFID's website www.dfid.gov.uk
3. In the preparation of this strategy, DFID distributed to research partners a letter with an update on the changes in DFID research funding, and an invitation to submit research topics that they considered should be included in the future research strategy. This was also placed on the DFID website. Over 400 responses were received. In addition, meetings were convened at DFID's request by four independent professional institutions. The workshops on particular aspects were subsequently held as follows:
 - *Health and well-being* - the Royal Society for Tropical Medicine on the 15 October, 2003
 - *Social and political change* - the Development Studies Association on the 16 October, 2003
 - *Applied technologies to improve livelihoods* - the Appropriate Development Panel of the Institution of Civil Engineers and the Tropical Agriculture Association on the 20 October, 2003.

The external chairs of these three meetings met with the Central Research Department when screening began.

4. The proposals were reviewed first by a team of DFID advisers, and then by a team of senior staff. The panel applied the following criteria:
 - Potential contribution to the Millennium Development Goals, or longer-term poverty reduction; (including would more research generate new knowledge that would make a difference, or is it more a question of applying what we already know?)
 - How researchable the topic is
 - Whether other donors are already funding sufficiently, or alternatively whether DFID participation would encourage other donors
 - Whether DFID has a comparative advantage as a funder, for example from past networks and British expertise.
5. Applying these criteria to the suggestions received, we came up with the broad programme areas in the text above. The full list of topic suggestions has been retained to inform the process of scoping research topics during 2004/5.
6. In December 2003, a draft of this research funding framework was sent for comment to peer organisations: two bilateral research funding agencies, one international private Foundation, and the Office of Science and Technology (OST). All responded positively. OST also saw a revised draft in February, and again responded positively.
7. The draft framework was published for public consultation on 11 May 2004. By the deadline of 9 July, 114 responses were received, over 80% from British organisations and individuals with a direct interest in research. There was a general welcome for the increased focus on research, and specifically for better co-ordination with the UK research councils and other donors, communication, Public-Private Partnerships for product development, demand-led research, and the retention of a funding window for small-scale, responsive proposals.
8. Major responses have been taken into account in producing this final version of the strategy. Many suggestions were made for example on capacity-building, quality control, and the need for additional resources if the ambitious targets were to be met. Correspondents pointed to the advantages of specific Funders Fora, for example on health and environment, rather than just a single one on International Development. Many commented on an apparent shift towards technology research, with views divided between criticisms and plaudits: we believe that the balance between social and technology research is about right, but amended the text especially to reflect the need for social as well as natural sciences in addressing all four big issues. More detailed comments, on particular topics, will help to shape our work as we implement the strategy. A summary of the comments received, with DFID's response, will be available on the DFID website.

Practicalities for bilateral research programmes

1. By bilateral programmes, we mean programmes where DFID is the commissioning funder.
2. One lesson of the past is the advantage of coherence and long running (say five year) programmes. A strong director of a long running programme can pull together syntheses, and lessons from past and current research experience, focus on more promising avenues, and make links with policymakers over time. Long running research offers possibilities for developing country institutes not just to collaborate, but to participate in the leadership of the programme, and build up their own capabilities. Therefore, in the first group of bilateral programmes, DFID is calling for five-year cross-country consortia. These consortia will include developing country institutes. The budget for each will generally be between £0.5 million and £2 million per year, depending on the nature of the research.²² There will be an international bidding process, followed by peer review and selection by a Research Board.
3. However, this format will not necessarily be followed in subsequent calls. The format of future bilateral programmes will be thoroughly reviewed in 2005, in the light of the 2004 evaluations of the Renewable Natural Resources (RNRRS) and Engineering (EngKaR) programmes, as well as the mid-term reviews of social science Development Research Centres and the triennial reviews of Health Knowledge Programmes.
4. The preliminary list for the first call for new bilateral programmes was reviewed in July, in the light of responses from the funding framework consultation process, as a result of which one was postponed for further thought and the others were amended. DFID then put out a call for the first expressions of interest in August 2004.²³ The terms of reference for the first salvo of new programmes, termed Research Programme Consortia, invite proposers to lay out the key issues to be researched, the relationship to other research in this area, potential members of the consortium, and broad methodology. The closing date for Expressions of Interest is 27 October 2004, with tenders invited from a short-list in November 2004. Awards will be made for spending in financial year 2005/6 and 2006/7. The first call was for the following topic areas:
 - Communicable diseases: Vulnerability, Risk and Poverty
 - Health systems, economics and financing
 - Reproductive health and HIV
 - Sexual and Reproductive Health and Rights
 - Maternal, Neo-Natal and Child health
 - Mental health
 - Faiths in development
 - Improving institutions for pro-poor growth.
5. Further calls for expressions of interest are expected:
 - For education, in winter 2004/5, following scoping work
 - For drivers of women's empowerment, winter 2004/5, following scoping work
 - For climate change, in summer 2005/6, following scoping work
 - For sustainable agriculture in Africa and other rain-fed regions, as well as natural resource management, following the evaluation of the Renewable Natural Resources programme – with programmes to start in 2006/7
 - For HIV/AIDS, following the new HIV/AIDS strategy and the end of existing programmes, to start in 2006/7
 - On renewable energy, water and sanitation, in the light of the evaluation of the Engineering Knowledge and Research programme and scoping, with programmes to start in 2006/7
 - Possibly, depending on further scoping in the light of comments received, on the role of production for different markets (domestic, regional and international) in stimulating economic growth in a globalised world.
6. The topic of *Where states do not work for the poor* will initially be taken forward by negotiating extensions of existing Development Research Centres, as provided for in their contract, as will chronic poverty. Any calls for new work will come later.
7. There will be a separate tender for a Transport Knowledge Partnership, to provide developing country users with better access to information on transport and infrastructure.
8. We wish to provide particular opportunities for innovative, bold research that challenges established thinking and practice. We plan two windows for this purpose:
 - future responsive programmes of small grants (paragraph 39 above). The timing of these will depend on discussions with potential co-funders.
 - horizon-scanning (paragraph 55), which will be developed once the DFID Chief Scientific Adviser is in place.

²² Much technology research is relatively expensive compared to policy research, requiring capital facilities and large-scale field trials.

²³ Calls for Expression of Interest appear on the DFID website www.dfid.gov.uk and were advertised in the Guardian, The BMJ, New Scientist, The Economist and Research Fortnight

Department for International Development

The Department for International Development (DFID) is the UK Government department responsible for promoting sustainable development and reducing poverty. The central focus of the Government's policy, based on the 1997 and 2000 White Papers on International Development, is a commitment to the internationally agreed Millennium Development Goals, to be achieved by 2015. These seek to:

- Eradicate extreme poverty and hunger
- Achieve universal primary education
- Promote gender equality and empower women
- Reduce child mortality
- Improve maternal health
- Combat HIV/AIDS, malaria and other diseases
- Ensure environmental sustainability
- Develop a global partnership for development

DFID's assistance is concentrated in the poorest countries of sub-Saharan Africa and Asia, but also contributes to poverty reduction and sustainable development in middle-income countries, including those in Latin America and Eastern Europe.

DFID works in partnership with governments committed to the Millennium Development Goals, with civil society, the private sector and the research community. It also works with multilateral institutions, including the World Bank, United Nations agencies, and the European Commission.

DFID has headquarters in London and East Kilbride, offices in many developing countries, and staff based in British embassies and high commissions around the world

DFID's headquarters are located at:

DFID, 1 Palace Street, London SW1E 5HE
DFID, Abercrombie House, Eaglesham Road, East Kilbride, Glasgow G75 8EA
Tel: +44 (0) 20 7023 0000
Fax: +44 (0) 20 7023 0019
Public Enquiry Point: 0845 300 4100 (from outside the UK: +44 1355 84 3132)
DFID website: www.dfid.gov.uk
Email: enquiry@dfid.gov.uk