



DFID Research

**SCOPING STUDY FOR WATER & SANITATION
RESEARCH-INTO-USE PROGRAMME**

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ACRONYMS AND ABBREVIATIONS

Acronym	Definition
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
BPD	Building Partnerships for Development
CCAA	Climate Change Adaptation in Africa
CAADP	Comprehensive Africa Agriculture Development Programme
CGIAR	Consultative Group on International Agricultural Research
CLTS	Community-Led Total Sanitation
CORAF/ WECARD	Was “Conference of the agricultural research leaders in West and Central Africa” now called “West and Central African Council for Agricultural Research and Development”
CRD	Central Research Department of DFID now called DFID Research
DFID	Department for International Development
EcoSan	Ecological Sanitation
EngKaR	Engineering Knowledge and Research
FAO	Food and Agriculture Organization of the United Nations
HCES	Household Centred Environmental Sanitation
ICT	Information Communication & Technology
IFS	International Foundation for Science, Stockholm
IMF	The International Monetary Fund
IP	Intellectual Property
IPTRID	International Programme for Technology and Research in Irrigation and Drainage; part of the Land & Water Development Division of FAO.
IUDD	Infrastructure & Urban Development Department
IWMI	International Water Management Institute, a non-profit scientific organization funded by CGIAR
IWRM	Integrated Water Resource Management
KM4Dev	Knowledge Management for Development
LDC	Less Developed Country
LIC	Low Income Country
MDG	Millennium Development Goal's
NGO	Non-Governmental Organisation
NR	Natural Resource
NRM	Natural Resource Management
OD	Open Defecation
ODF	Open Defecation Free
PAB	Policy Advisory Board
PAC	Policy Advisory Committee
PCC	Programme Consultative Committee
PPP	Private-Public Partnership
PRS	Poverty Reduction Strategies
PRSP	Poverty Reduction Strategies Paper; term often used by World Bank and IMF
R4D	Research for Development – DFID Web site
RIU	Research into Use

Acronym	Definition
RNRRS	Renewable Natural Resources Research Strategy
SPLASH	The name of the European Union Water Initiative European Research Area Network (EUWI Era-Net).
SRO	Sub-Regional Office
SSA	Strategic Sanitation Approach
ToR	Terms of Reference
TSSM	Total Sanitation and Sanitation Marketing
UN	United Nations
WASH	Water, Sanitation and Health for all
WATSAN	Water & Sanitation
WB	World Bank
WRDMAP	Water Resource Demand Management Assistance Project
WSP	Water and Sanitation Programme

1 INTRODUCTION

1.1 Background

- 1 DFID's new Research Strategy (DFID 2008) commits DFID Research to undertake research that will contribute to the achievement of the hardest to reach Millennium Development Goal's (MDGs). MDG 7 (Environmental Sustainability) targets include halving the proportion of people living without [sustainable access to safe drinking] water and [basic] sanitation; almost 900 million people still lack safe drinking water and approximately 2.5 billion still have no access to basic sanitation. Since the goals were agreed in 2000 there has been insufficient progress toward the sanitation target and only limited progress on the water target. Over the years, DFID and other donors have invested considerable amounts in sanitation research and the challenge now is to ensure that the findings of this research are utilised to inform efforts and to increase progress towards the MDGs. To increase the utilisation of the outputs from previous DFID funded research programmes DFID proposes to develop a 'research-into-use' (RIU) programme that will operate in support of DFID, country governments, donor partners, civil society and research and development stakeholders to help achieve the MDGs in Water and Sanitation, for the support of economic growth.
- 2 In their updated Water and Sanitation Policy (DFID 2008), DFID recognises that while there has been real progress towards meeting the water and sanitation MDGs, significant challenges remain as the MDG target for access to safe water is only just on track while progress towards the sanitation MDG is seriously off-track. Almost 900 million people still lack safe drinking water and approximately 2.5 billion still have no access to basic sanitation.
- 3 DFID's Water & Sanitation Policy identified three key areas in which their existing commitments need to be strengthened to accelerate progress to meeting the water and sanitation MDGs:
 - A stronger focus on Sanitation;
 - Improving water resources management to boost economic growth, cope with climate change and improve security;
 - Advancing water sector governance.
- 4 DFID believes that achieving the MDGs on water and sanitation will mean investing more money, while making sure the funds are spent effectively and fairly. As part of the DFID's work to develop a water research programme that helps to fill critical knowledge gaps (DFID 2008), DFID wants to review the outputs from past investments in water and sanitation research, mainly through the EngKaR Programme, to determine whether with targeted funding there is scope to increase the spread of knowledge from the research outputs and thereby contribute to achieving the water and sanitation MDGs.

1.2 Objectives of the Scoping Study

- 5 The Terms of Reference for this Scoping Study state that *"DFID wishes to develop a 'research-into-use' programme that will operate in support of country governments, donor partners, civil society and research and development stakeholders to help achieve the MDGs in Water and Sanitation, for the support of economic growth."*
- 6 The objectives of the Scoping Study are to *"identify programme content and implementation modalities and production of project documents of a DFID [Research] programme for enabling research outputs to be used. The subject area will be water, sanitation and hygiene research for developing countries. The programme will enable the promotion and adoption of outputs from DFID's EngKaR programme and wider DFID experience where there are specific issues of policy relevance."* Note, DFID's Central Research Department has recently been renamed DFID Research.

- 7 The terms of reference for the current scoping study state that the programme should focus on National initiatives in Africa and Southeast Asia¹ and should include partnerships at local, national and regional level to develop their capability.
- 8 The full ToR are given in Annex A. Not specifically stated in the ToR, but inherent from DFID's Research Strategy paper is the need to address the longer term development challenges beyond 2015.

1.3 Scoping Study Methodology

- 9 The Scoping Study was carried out in two phases. In the first phase, activities included reviewing current literature on research into use, consulting with stakeholders in water and sanitation and water and sanitation research and mapping of current and planned RIU activities being undertaken in this field. A draft Scoping Report was then prepared to present a range of possible modalities for implementation of a water and sanitation RIU Programme. In the second phase, based on the recommendations of the draft RIU Scoping and the outcome of discussions with DFID, the proposed RIU programme was combined with the proposed Sanitation Research Programme². The RIU Scoping Study Report was finalised and a programme document for the Sanitation and Hygiene Research Programme was prepared with an RIU component.
- 10 The consultation process involved interviews and e-mail exchanges with key staff from different stakeholders and individuals representing different sectors and interests within water and sanitation. A questionnaire was used to focus discussion and to record the respondent's answers. The information from the questionnaires and interviews was analysed to identify the scope of a possible water and sanitation RIU programme. The list of people consulted and contacted is given in Annex B, and the questionnaire is given in Annex C.
- 11 The RIU Scoping Study has been undertaken by ITAD Water with a team comprising of Alan Beadle (Team Coordinator), Don Brown, Kevin Tayler, Ian Tod, with contributions from Michael Snell, Jeremy Colin, Julian Barr, Simon Bibby and Saleha Begum.

1.4 Scope of this Report

- 12 This Scoping Study Report was prepared to describe the findings of the first phase of consultations, literature review, and identification of the scope and modalities of the RIU water and sanitation Programme. It also reflects the outcomes and decisions made with DFID during discussion of the Draft Scoping Study.
- 13 There are five sections: an introduction followed by a literature review, a description of the Consultation with stakeholders, a discussion of the key findings from literature review and consultation and a final section on recommendations.

1.5 Expectations for the RIU Programme

- 14 In the Terms of Reference for the RIU Scoping Study, the expectations for the RIU Programme are given as:
 - (a) *"The programme will identify about 30 research outputs from DFID's previous ENGKAR programme, and wider DFID experience where there are specific issues of policy relevance, based on their potential to contribute to sustained growth and poverty reduction."*
 - (b) *"It will work on their promotion and widespread use in Africa and South and South East Asia."*
 - (c) *"Evidence of the impact of the project activities will be collected, and lessons learnt and disseminated on how best to take forward water, sanitation and hygiene research to maximise its impact on poverty reduction."*

¹ South Asia was added during discussions with DFID

² Scoping Study for the Sanitation Research Programme ITAD water 2009

- (d) *“The programme will focus on the use of existing and new knowledge to achieve the MDGs in water, sanitation and hygiene, and identify and implement uptake activities (action research and pilots) to put research into policy and practice focusing on outputs and outcomes.”*
- (e) *“The programme will support existing initiatives and programmes with evidence – based innovation, knowledge and policy outputs..”*
- (f) *“Activities which are driven by demand and clear pathways to impact will be given priority for support.”*
- (g) *“Local research capacity development will be an important element including support to ensure that global knowledge is available at the local level, customised to local circumstances and local involvement and champions.”*
- (h) *“Knowledge exchange will also be supported, especially between developing country partners.”*
- (i) *“The programme will support existing partnership arrangements in the countries where it works to ensure that the programme is harmonised with other’s activities.”*
- (j) *“Dissemination activities – particularly the synthesis and sharing of success stories will be included.”*
- (k) *“Strong emphasis on the poorly performing sanitation and hygiene sector.”*

15 To summarise these requirements, the Programme is to:

- Distil out suitable research results and knowledge from the former EngKaR programme and other DFID-funded work, (a), (d), (f) and (k) in the above list.
- Promote the effective use of this knowledge in relevant parts of the world, exploring ways to do this and developing local research capacity, (b), (c), (g) and (j) above.
- Collaborate with other actors and programmes, (e), (h), and (i) above.

16 During discussions with DFID following submission of the first draft of this report it was agreed that the programme would not research RIU but should disseminate any findings through the “lessons learned” component of the RIU programme. It was agreed that non-DFID knowledge could be incorporated in the RIU programme where it was considered to be a necessary component of “clustered” work; i.e. where it will support the uptake of DFID knowledge to achieve the desired outcomes.

17 The remainder of this report discusses ways and means for the fulfilment of the RIU Programme’s purposes, objectives and options concerning its precise scope.

1.6 Defining Water and Sanitation

18 The term “water and sanitation” is used to cover a wide range of activities and in the context of this scoping study³ “water” is taken to include:

- Water for Food (irrigation and drainage, aquaculture, etc.)
- Water for People (domestic water supply, sanitation, health and hygiene promotion, cultural use of water, etc)
- Water for Industry and Energy (hydropower, industrial production, etc.)
- Water for Nature (protecting ecosystems, ensuring ecosystems services, etc.)
- Water Resources Management (improved assessment, development and management of water resources)

In addition, there are cross cutting issues (trans-boundary, coastal zone management, etc).

³ This report has utilised the classification of water developed by Splash (the [European Union Water Initiative](http://www.splash-era.net) European Research Area Network, see www.splash-era.net), see Section 2.4.4

19 Similarly “sanitation” is taken to include:

- Safe collection, storage, treatment and disposal/re-use/cycling of human excreta (faeces and urine) and the related behaviour changes required to achieve this;
- Hygiene related to “safe hand-washing practices”;
- Drainage and disposal /re-use/recycling of household waste water (also referred to as “grey water”);
- Treatment and disposal/re-use/recycling of sewage effluent;
- Safe water storage;
- Drainage of storm water.

1.7 Defining Research into Use

20 The ToR include: “research into use” and “learning lessons”. It is noted that the ToR do not include “research into research into use”. The requirement in the RIU Programme is to devote two thirds of the budget to operationalising existing knowledge and one third for monitoring, evaluation and disseminating lessons learned from the exercise.

2 LITERATURE REVIEW: ISSUES FOR RIU

- 21 This Section looks first at the work undertaken by the EngKaR programme and then in Section 2.2 at how accessible the EngKaR knowledge is to stakeholders. Following this, in Section 2.3 we examine alternative approaches to RIU, the difficulties for successful RIU in developing countries, and DFID's own policies and strategies for dissemination of knowledge. Finally, we examine activities by others in the field of RIU.
- 22 The list of references is given in Annex D.

2.1 *The EngKaR Programme*

2.1.1 Programme Description

- 23 The importance of infrastructure service provision to both sustainable development and the eradication of poverty in Developing Countries is well documented⁴. Improved infrastructural services can bring immediate benefits in terms of helping poor people to meet their basic needs for safe drinking water, secure shelter, energy, transport, and so on. They can also facilitate sustainable economic growth in the longer term through, for example, improved health giving people increased ability and opportunity to find and retain work; reduced input and transaction costs associated with the production and sale of goods and services; and enhanced human capital and mobility.
- 24 There are gaps in the knowledge available to those promoting development – some gaps are basic gaps in understanding; others are gaps between what researchers know and what policymakers do. So, a DFID programme to create, package and exploit knowledge in these areas is important. A key challenge is to fund research that is both a widely available public good and actually has an impact upon policy and practice.
- 25 The Engineering Knowledge and Research (EngKaR) programme was intended to meet this challenge. The crux of the programme was aimed to solve specific problems in development and infrastructure and then to communicate the solutions to others, so that the new knowledge won was re-used to generate wider public good. It ran in various forms since the 1980s, providing technical, managerial and policy solutions in the infrastructure and urban development sectors that helped enable poor people to escape from poverty on a sustainable basis. In its early years the focus of the programme was very much on the development and transfer of new technologies for use in developing countries. Latterly there was a shift in emphasis, with a greater proportion of projects investigating barriers to infrastructure provision, maintenance and access, with a particular focus on sustainable solutions and pro-poor 'livelihoods' approaches with increasing involvement of southern partners in projects.
- 26 Over the past 15 years, the DFID EngKaR programme invested approximately £100m in some 600 projects across seven sectors, mostly undertaken in collaboration between UK research institutions and partners in Developing Countries. The seven sectors funded by EngKaR were:
- Disability & Healthcare;
 - Energy; Geosciences;
 - Information Communication & Technology (ICT);
 - Transport;
 - Urbanisation;
 - Water and Sanitation.

⁴ See the "Making Connections – Infrastructure for Poverty Reduction" (DFID 2004) for a discussion of the role of infrastructure in poverty reduction.

27 In addition, there was a “Cross-Cutting” sector for technical and non-technical issues, which linked between the other seven sectors, addressed the links between infrastructure and urban sectors and other disciplines, or that provided practical methods for improving demand for communication and uptake of research within and external to IUDD sectors.

The main findings of the evaluation of the EngKaR Programme (Technopolis and ODI 2005) were:

- The programme used a modern programme management and administration process and is well regarded by participants;
- Research projects funded by EngKaR tend to be of good technical quality but the portfolio of projects is fragmented – both thematically and geographically;
- The portfolio lacks sufficient critical mass in any one area to really make a substantial and visible difference;
- While EngKaR has significantly improved the way it collects, manages and creates access to project results, their fragmentation means that projects do not greatly benefit from being parts of a larger programme;
- Project leaders believed the major benefits of the projects in country were improved infrastructural services, environmental management and incomes; and that projects induced improved planning and management capability, improved knowledge and understanding of technical issues and improved understanding of poverty alleviation measures. Such benefits resulted from proactive interaction with partners and other intended beneficiaries;
- Projects tended to increase the capabilities of the southern research partners, in the sense that the experience and ability of those involved in EngKaR projects were increased, but not to build new and sustainable capacity, in the sense of extra people with a good prospect of retaining their jobs after the project funding runs out;
- Fundamental weaknesses of the programme are that it has not sought to establish the current state of knowledge and main knowledge gaps in each area of its operation, provided a planning link to beneficiaries or identified the way in which externalities will be achieved.

28 The Evaluation’s overall conclusion on the EngKaR programme is that it has supported a collection of relevant, well-conducted projects in areas of great importance to international development and poverty alleviation efforts. The projects have generally adopted practical, poverty-focused, participatory approaches in researching practical aspects of infrastructure provision, maintenance and engineering appropriate for developing countries. They have produced a significant body of information, insights and practical guidance, which has been well packaged and communicated, particularly in recent years. As a result, the programme made a useful contribution to the available body of knowledge and to DFID’s (and the UK research community’s) reputation in developing countries.

29 The Evaluation noted that the extent of take-up and application of the work in developing countries is less clear. In some areas the impacts of the projects appear to have been or are expected to be high, but little attention or resource has been devoted to managing the process of realising and assessing impacts. There are concerns as to the extent of impacts outside those directly engaged in individual projects.

2.1.2 Water and Sanitation Sector in EngKaR

30 Water projects were seen as a central element of DFID country programme inputs aimed at improving the quality of life of people in poorer countries (DFID 2002). DFID water related activities reflected the importance of helping poor people meet their basic need of

safe water for drinking, water for food production and improved sanitation, together with the task of promoting integrated water resources management.

- 31 Within the Water and Sanitation Sector during the final phases of the programme (2000 to 2005), there were four themes⁵:
- W1 (incorporating previous theme W2) – Water Resources Management (Improved assessment, development and management of water resources). Optimal development of water resources in many countries is difficult to achieve because of the fragmentation of responsibilities between government departments. Research was required into appropriate policies and regulatory frameworks to allocate and manage water resources in an integrated and sustainable manner. Areas of interest included development of appropriate water legislation, and the regulatory environment to manage demand; improve planning; monitor use and avoid over exploitation of the resource.
 - W3 – Combating Degradation of Water Resources (Increased protection of water resources, water quality and aquatic eco-systems) Water degradation can have a chronic and sometimes catastrophic impact upon the lives and livelihoods of the poor. This can be directly through disease or illness and indirectly through land and natural resource degradation upon which people are dependent. To develop sustainable solutions to these problems, i.e., to analyse and address the underlying causes in the social, economic and institutional environment along with the technical issues that will help alleviate water resource degradation. DFID's W3 strategy evolved through a series of regional consultations to develop three priority areas of research: (i) analysis of hydrological impacts of urban/industrial pollution; (ii) identification of processes that lead to agro-chemical pollution and means to mitigate the impacts; and (iii) analysis of the impact of urban sewage and industrial pollution on aquatic and coastal ecosystems.
 - W4 – Water and Sanitation (Raise the well-being of the rural and urban poor through cost effective improved water supply and sanitation). There are still significant problems in enabling the 2.5 billion people who lack sanitation and over 900 million people lacking adequate water supplies to have access to affordable, effective, equitable, sustainable and efficient sanitation and water supply services. The challenge is: how to apply the technologies available in the complex social, institutional, and economic context of water supply and sanitation. Some of the issues to deal with are the provision of cost-effective urban sanitation, operational techniques integrating hardware and software, gender roles in sanitation and water supply, and dissemination of products of research projects leading to successful uptake into practice.
 - W5 – Water for Sustainable Food Production (Improve availability of water for sustainable food production and rural development). While projections for future food requirements vary widely, all major estimates point to a growing food gap in developing countries. Water is indispensable to agricultural production but on a per capita basis it also a dwindling resource. In addition, there is increasing competition for water from other sectors. In future, food may have to be produced from a limited land resource, with less water, and with minimum environmental disruption. New methodologies, approaches and institutions will be required to meet this need. Further research is required into methods for improving the overall performance of irrigation systems, together with essential associated drainage systems.
- 32 The water and sanitation sector received about 39% of the EngKaR funding (Technopolis and ODI 2005). About 214 water and sanitation projects were funded at a cost of

⁵ Earlier on the programme there were six themes but two themes were incorporated into the other four themes. Although some theme numbers were no longer used, they were retained to keep consistency over time.

£42,154,956 (out of the total EngKaR cost of about £ 107 million) and an average cost per project of £196,986.

- 33 During the early '90s, EngKaR was dominated by work in the Water & Sanitation area (over 50% of the total) though by the mid 90s this had declined to about 40% of the total. In the late '90s there was much more balance across the five main EngKaR sectors. From 1999 onwards, two new Sectors were introduced, but Water & Sanitation still dominated.
- 34 The main organisations receiving EngKaR water and sanitation funding are shown in Table 1, indicating that the programme has spent a large proportion of its funds through a relatively small number of 'key' research performers. These core participants are a mix of public and private research institutes and laboratories, universities, non-governmental organisations (NGOs), and private consultancies, and are the leading research groups nationally. Among the other 120+ organisations that have led EngKaR projects are several charities, international donors and aid agencies, engineering firms, and so on. From 2001, as part of the process of untying research, the programme was opened up, so that organisations from outside the UK could apply for projects and receive funding without the need for a UK partner to be involved.

Table 1: Main Organisations Receiving EngKaR water and sanitation funding

Organisation	Number of projects	Total funding	Average funding per project
British Geological Survey (G / W)	54	£ 9,762,332	£ 180,784
University of Loughborough (W)	41	£ 7,508,972	£ 183,146
ITDG [including ITC] (E / U)	37	£ 6,948,147	£ 187,788
HR Wallingford (W)	34	£ 9,295,280	£ 273,391
Institute of Hydrology (W)	14	£ 2,416,738	£ 172,624
University of Leeds (W)	11	£ 1,528,585	£ 138,962

Note: figures shown may include funds received for research on other EngKaR themes
Source: Tecnopolis and ODI 2005.

- 35 In addition to the lead partners or 'prime contractors', a large number of partner organisations, most of which are based in developing countries, were involved in EngKaR projects. Organisations from over 120 different countries acted as formal partners to EngKaR projects. Table 2 lists the top ten countries in terms of the numbers of project participations undertaken by organisations based in that country, along with the total cost of those projects. It shows that India has been the country with the highest level of involvement overall, participating in almost a quarter of all of the projects. Sub-Saharan African countries figure strongly in the list, with Kenya, Zimbabwe, Uganda, South Africa, Ghana and Tanzania each participating in over 50 EngKaR projects. Towards the bottom of the list are other countries from the Asian subcontinent. Though not in the top ten, there has also been significant involvement by organisations based in middle-eastern, South East Asian and South American countries.

Table 2: Top Ten Countries by number of Participations and Project Partners

Country	Participations	Cost of projects
India	138	£ 29,471,405
Kenya	76	£ 15,881,611
Zimbabwe	73	£ 17,160,658
Uganda	72	£ 13,671,253
South Africa	65	£ 13,961,546
Ghana	57	£ 11,988,445
Tanzania	56	£ 11,096,828
Bangladesh	44	£ 7,782,558
Sri Lanka	44	£ 8,736,669
Nepal	43	£ 9,926,507

Note: data is for all EngKaR projects. Data for water and sanitation projects are not available. Source: (Technopolis and ODI 2005)

- 36 The Technopolis report evaluated the research dissemination approach previously used by DFID and concluded that the Resource Centres were doing a reasonable job and were improving their performance with experience. These resource centres have now evolved and changed with new people and organisations taking over the work. However, whilst EngKaR knowledge is available through these centres, it is questionable whether these changes have resulted in any improvement in the dissemination of research knowledge; in particular, knowledge is generally only targeted at other research professionals and access to the knowledge is generally available reactively rather than proactively.
- 37 Technopolis suggested that clustering projects so that they are mutually supporting would significantly improve their impact. They also concluded that, because of the disparate number of unconnected research projects, *“retrospective efforts to improve the dissemination and take-up of the research investments, though valuable, are unlikely to overcome the key barriers to uptake, namely that there is too much untargeted information out there, and potential users do not know how to identify what is and is not of relevance and utility to them.”*
- 38 The Technopolis report also identified the TvE⁶ as a successful communications format which generated significant levels of demand for information. DFID have continued to fund this platform.

2.2 Availability and Ease of Access to EngKaR Knowledge and Outputs

- 39 From the R4D DFID web site when searching for documents relating to “water” and then “sanitation” some 500 items are returned; however, there is a significant overlap between these two searches. Information on the EngKaR water and sanitation projects is available on several websites as shown in Table 3.

⁶ TvE is a UK registered charity that works with partners globally to make and distribute films that inspire change, see www.tve.org/network.html

Table 3: Availability of Information on Water and Sanitation Research Projects

Web address	Content	Notes
http://www.dfid-kar-water.net/home.shtml	Basic information on individual projects	Unfortunately, there appears to be no further information on the internet on some of these projects.
http://www.dfid-kar-water.net/W4.SHTML .	A list of projects relating to water supply and sanitation	WEDC were responsible for a large percentage of these projects.
http://www.dfid-kar-water.net/PROJECTS/W1.SHTML .	List of projects relating to water resources	
http://www.dfid-kar-water.net/PROJECTS/W3.SHTML .	List of projects relating to water quality	This includes projects that deal with the treatment of wastewater.
http://www.dfid-kar-water.net/PROJECTS/W5.SHTML .	A list of projects relating to water for food	
http://www.lboro.ac.uk/garnet/UrbanKar/projects.htm	A list of projects under the urbanisation theme	Theme U2 has several projects with a water and sanitation focus.
http://www.lboro.ac.uk/well/resources/consultancy-reports/task0065.htm .	Brief descriptions and links to outputs relating to the water and sanitation theme (W4)	Does not include details of some later projects.
http://www.research4development.info/	Lists numerous references on water and sanitation	Only some are listed as EngKaR outputs.

- 40 Many of these EngKaR projects are now several year's old and hence, up-dating the current status of knowledge must be an initial activity when selecting items for inclusion in any RIU programme.
- 41 Review of the projects included in the water supply and sanitation category (W4) reveals a wide range of topics. The main subjects covered by these projects can be broadly grouped into the following categories:
- Private sector involvement in service delivery, both 'conventional' and through the activities of 'small scale local providers';
 - Sanitation policy and strategy;
 - Gender aspects of WatSan;
 - Management of water and sanitation systems (mainly in an urban context);
 - Urban sewerage and sanitation;
 - Groundwater, wells and boreholes;
 - Urban water delivery;
 - Water treatment;
 - Wastewater treatment;
 - Social marketing.

- 42 In addition, there were a few EngKaR projects dealing with water law, livelihoods, rainwater harvesting, health aspects of water and sanitation and water pricing/demand.
- 43 Several projects in W4 dealt with aspects of water treatment and at least one with wastewater treatment, which was also well represented under the water quality theme. This is one area that could probably benefit from integration and dissemination of research results. It can be argued that the provision of in-house sanitation has a greater impact upon human well being than wastewater treatment, since, it impacts directly upon human exposure to faecally transmitted pathogens. Hence, water and wastewater treatment may have a lower priority for DFID and other donors since they do not necessarily have such a direct impact. One of the EngKaR water treatment projects was on water treatment technologies using natural materials, including moringa seeds. GTZ also carried out research into the use of natural substances to assist in flocculation processes, including the use of moringa seeds in the 1980s. The key point is the need to look at complete sanitation systems rather than individual components – so that faecal sludge collection systems become important for on-site sanitation.
- 44 There are other non DFID references relating to sanitation systems which are worth noting in the context of any RIU programme, for example, Paterson, Mara and Curtis, 2005⁷, argue that ‘simplified’ sewerage is pro-poor and conventional sewerage is not, and also a number of World Bank⁸ projects and papers on urban drainage contributing to sustained improvement in living conditions for low income residents.
- 45 Projects implemented under W4 on water quality include those relating to:
- Wastewater management, for both domestic and industrial wastewaters and including management of decentralised systems. (There are projects on both waste stabilisation ponds and constructed wetlands but rather more listed on the EngKaR website relate to industrial wastewater, its treatment and its effects);
 - Fluoride/arsenic – both removal and ways of reducing impacts;
 - Solid waste disposal by landfill and incineration and including projects on measuring the impact of leachates on groundwater and dealing with those leachates;
 - Urban groundwater, including the potential risk to groundwater quality from urban on-site sanitation.
 - The WEDC website also includes reference to a Leeds University project on lime treatment of wastewater to enhance primary settlement. This is potentially interesting because some commentators advocate ‘chemically enhanced primary settlement’ as an appropriate response to wastewater treatment needs in developing countries. (See for instance Harleman et al⁹).
- 46 The Water Resources theme (W1 and W3) encompassed a wide variety of projects. Subjects covered by more than one project include:
- Artificial recharge;
 - Water rights and water scarcity;
 - Community based management and monitoring of water resources (both surface and ground water);
 - Trans-boundary and global water resource issues;

⁷ http://eprints.ncl.ac.uk/file_store/nclrep_381195124772.pdf

⁸

<http://lnweb90.worldbank.org/oed/oeddoclib.nsf/DocUNIDViewForJavaSearch/E4D5654D232EA048852567F5005D5317>

⁹ Harleman D Murcott S and Chagnon F (undated) Appropriate wastewater treatment in developing countries: Experiences with CEPT. See

http://cd3wd.com/CD3WD_40/ASDB_SMARTSAN/DRFH_Experiences.pdf

- Water resource planning, including the effect of climate change on water resources;
 - Groundwater modelling, protection and management;
 - Hydrology, including the estimation of low flows and estimation of urban run-off flows.
- 47 Based on a quick review of the projects implemented under the themes W1 and W3¹⁰ on water resources, they are arguably more theoretical than those implemented under the water and sanitation theme (W4). This might mean that there is more scope for finding ways of translating fairly academic work into information that would be of practical use in the field. On the other hand, whilst there are some projects with very practical outputs, the more academic work will require significantly more preparation before it is practically useful.
- 48 Most of the EngKaR research for waste water treatment, which many would consider as water for nature, was included under W3. Much of it was about extensive treatment systems (ponds and constructed wetlands) and whilst good in theory, there is rarely sufficient land for these options, at least when considered at a town or city-wide scale. Also, the research does not seem to address the practical management problems that arise with these technologies, in particular, that of de-sludging waste stabilisation ponds, which seems to be the main reason for their failure as a sustainable process.
- 49 The water for agriculture theme (W5) covers many projects relating to various aspects of irrigation. Specific subjects covered include:
- Community involvement in irrigation system management
 - Irrigation and livelihoods
 - Private sector involvement in irrigation management
 - Techniques for reducing water use
 - Water lifting devices
 - Gender and irrigation
 - The economics of irrigation
 - Aquaculture
 - Dealing with salinity/salinisation
- 50 Towards to the end of the EngKaR programme, DFID commissioned a scoping study for possible follow-on DFID funding of research into water for development (Tod et al 2005). One of the components of the recommended water for development research programme was **Communication of research outputs** including synthesising and consolidating outputs from past DFID-funded research and development programmes in water and sanitation, and to build a technology platform for new knowledge resulting from research funded by DFID or other organisations. The communications would be done in different ways at different levels:
- Within country where the requirement is to engage with policymakers, practitioners and end users. There may be the need for broader policy fora on water issues involving a range of sectors.
 - Within regions where the requirement is to adapt and promote research findings to other countries with similar environments. There may be a need to create 'knowledge platforms' and develop regional networks of researchers and end-users, and develop collaboration with other bilateral donors.

¹⁰ <http://www.dfid-kar-water.net/PROJECTS/W1.SHTML> and <http://www.dfid-kar-water.net/PROJECTS/W1.SHTML>

2.3 Research into Use: Approaches and Theory

51 This section looks at RIU methodologies and potential constraints. It then looks at research and communication methodologies identified in DFID's policy and strategy papers.

52 RIU methodologies basically fall under three headings:

- **Push** – where someone decides what research needs to be operationalised;
- **Pull** – where someone has a problem and needs a research answer;
- **Enabling** – where the communication links between researchers, policy makers, practitioners, and end users are strengthened so that information can be easily found and used.

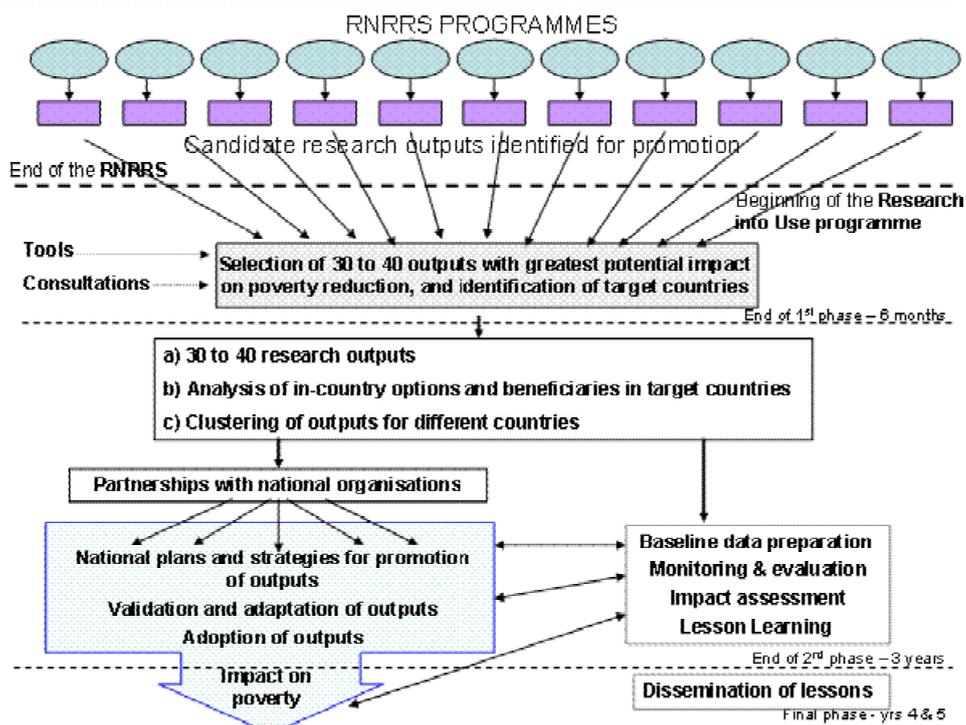
These are discussed in more detail below.

2.3.1 Approaches to RIU

53 When considering the outputs from the EngKaR programme there are three ways of approaching RIU, including:

- Move stock of **existing research into use** as shown in Figure 1. This RIU process requires initial screening of existing research outputs to identify those projects with the greatest potential impact on the MDGs. The approach will require a combination of the people and networks that did the research plus the addition of new skills in innovation and communications.
- **Knowledge brokering**: where there is an intelligent interface between the stock of knowledge provided by someone who knows the body of knowledge intimately and the problems/knowledge gaps of the sector. This has aspects of a 'help desk' and could be linked to a research centre.
- Improving the systems and providing an enabling environment for generically getting sectoral knowledge into use through systems strengthening or **innovation systems**. Innovation systems shift the focus from supplying new knowledge and technology from research to addressing the conditions needed to demand and use knowledge to bring about change.

Figure 1: The NR Example of Research into Use

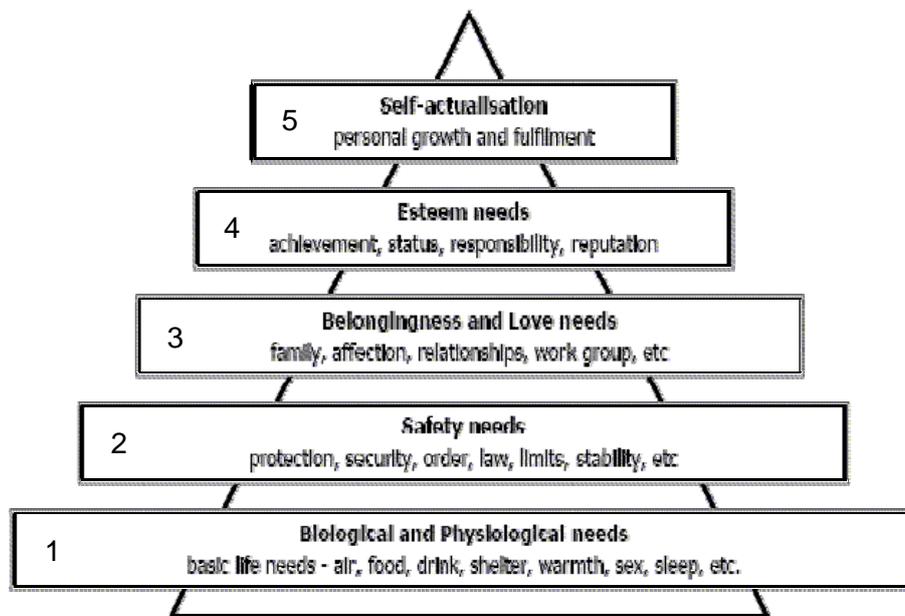


- 54 An innovation system can be defined as *“That set of distinct institutions which jointly and individually contribute to the development and diffusion of new technologies and which provides the framework within which governments form and implement policies to influence the innovation process. As such it is a system of interconnected institutions to create, store and transfer the knowledge, skills and artefacts which define new technologies”* (Metcalf 1995).
- 55 Innovation systems have been promoted and utilised in the agricultural sector where the need for closer linkages between research and wider use has been recognised for over twenty years (Arnold et al undated, Hall 2007 and Hall 2007). One of the challenges of innovation systems is that there is no well recognised innovation systems approach. Instead, planners and entrepreneurs need to operationalise in their own contexts and in ways suited to their own goals. Some features of future innovation systems (Hall 2007) include:
- Multi-functionality (the broad range of goals and interest groups the sector must serve);
 - Collective intelligence (there is no longer a single source of information and technology);
 - Interconnectedness of scale. (locals production and livelihoods are increasingly connected to global preferences through international value chains and global phenomena like climate change and disease outbreaks);
 - Increasing rate and non-linearity of change (increasing inter-connectedness with its related multiple interest groups is contributing to the increasing pace of change and its non-linearity, due to faster transmission of ideas and the wider set of interactions that now exist between markets, policies and technologies).
- 56 The innovation systems concept is still relatively new in the design and implementation of water and sanitation research projects. One of the few examples where innovation systems approach is being tried is the Water Supply and Sanitation Technology Platform (<http://www.wsstp.eu/site/online/home>) that was created by the European Commission in 2004 to promote coordination of research and technology in the water industry.

2.3.2 Ability to Use Knowledge

- 57 One difficulty with trying to implement the innovation systems concept in a development context is that it was originally derived from the situation in the industrialised nations of the world (Freeman, 1988). The ability to use knowledge in an innovative way requires the stakeholders to have reached a certain level of sophistication.
- 58 Maslow's hierarchy of needs is a psychological theory proposed by Abraham Maslow (Maslow 1943) and although now quite old it is still in current use. The hierarchy explains how people are motivated by the urge to satisfy needs, starting with basic survival through to self-fulfilment. People cannot consider their higher needs until the lower ones have been met. The hierarchy in its original form had five levels (see Figure 2).
- 59 When considering development for the very poor, in particular when trying to achieve the MDGs, it is important to consider the potential obstacles which, by implication, this hierarchy puts in the way; for example, if our target group is only at level 1, Biological and Physiological needs, they will not and can not be thinking about the greater good of their community; water and defecation will be just that, and the need for water to be “safe” or for access to “sanitation” will not be in their minds. Hence, to be successful in moving “research into use”, it will be essential for the individuals and the community implementing the programme to have moved well up the hierarchy and feel secure in life, their family and their work.

Figure 2: Maslow's Hierarchy of Needs



2.3.3 Research Communication in DFID's Research Strategy

60 DFID's Research Strategy (DFID 2008) included a list of six mechanisms for delivering research and RIU:

- Research programme consortia (RPCs);
- International Networks for Growth and Climate Change;
- Other contracted programmes;
- Joint programmes with international funders and UK research councils;
- Multilateral programmes and international initiatives;
- Responsive research programmes.

61 The DFID Working Paper on Research Communication (DFID 2008) analyses in detail the many facets and difficulties faced in getting research into use. The working paper identified the following key messages from their consultation process:

- What developing countries often need most are "mundane" solutions, getting into use what research exists;
- Research is more likely to be used if it takes local circumstances into account;
- Communicate the results in a user-friendly way;
- Research is most likely to be appropriate when it has been developed by researchers in the host country and the issues addressed considered high priority for that country;
- Share this learning beyond the academic community;
- More syntheses and more tailoring to reach different audiences;
- Not only DFID's own commissioned research;
- DFID's research doesn't adequately inform their policymaking processes.

62 The paper also identified five thematic areas to be addressed:

Theme 1: Research on Communication

- The media – its role in research up take and use
- Information and Communication Technologies
- Research on policy processes

Theme 2: Supporting Researchers to Communicate

- Improve the incentives for researchers to communicate
- Build skills to communicate more effectively
- Strengthen the capacity and demand for evidence

Theme 3: Communication of research

- Making existing information more accessible
- Analysing and synthesising research to provide tailored information services
- More harmonised and effective communication of research

Theme 4: Facilitation of research up-take/enabling environment

Theme 5: Knowledge Management

- Monitoring & evaluation
- Lessons learned

2.4 Approaches to Research into Use by DFID and Others

63 This section examines what RIU activities by other organisations have been identified during the search of literature. It was not always possible to identify what has actually been done or achieved by the organisations.

2.4.1 World Bank: Knowledge Management

64 In 1996, the World Bank launched its “Knowledge Bank” strategy, with other development agencies following suit and networking together via a “Knowledge Management for Development” (KM4Dev) community of practice (WB Web site 2009).

65 The World Bank use the term “knowledge management” as defined in the American Productivity and Quality Center (APQC) (WB Web site 2009). This definition reads:

“Knowledge management is the systematic process of identifying, capturing, and transferring information and knowledge people can use to create, compete, and improve.”

66 The Knowledge Management for Organizational Capacity (KMOC) program¹¹ has established several partnerships in recent years to support the development of programs and content. The following are current, active partners:

- African Capacity Building Foundation
- American Productivity & Quality Center
- Bellanet
- Brazilian Knowledge Management Society
- Global Development Network

11

<http://web.worldbank.org/WBSITE/EXTERNAL/WBI/0,,contentMDK:20939032~menuPK:204788~pagePK:209023~piPK:207535~theSitePK:213799,00.html>

- GTZ
- Knowledge Management for Development (KM4Dev) Community
- KNOW Network
- Network Roundtable, University of Virginia
- United States Agency for International Development (USAID)
- United Nations Development Programme (UNDP)
- Working Knowledge Research Center, Babson College

2.4.2 World Bank Review of the Water Supply Sector

67 In 2003 the World Bank reviewed KMOC in the Water Supply Sector and the results are shown in Table 4.

68 Many of the documents are rated highly although it is worth noting that this apparently glowing report is only an assessment of how well the documents addressed the issues. It does not answer the question: “How well did the programme communicate its findings and lessons learned to key stakeholders?” Nor does it indicate how well the knowledge has been scaled-up or used elsewhere. So, although there is apparently good documentation, it is not so clear, whether it is being used by anyone, particularly the national stakeholders.

Table 4: Summary of Average Scores for Water Supply Documents on Six Criteria by Document Type, Sub-sector, and Criterion

Document Type	Relevant	Comprehensive	Knowledgeable	Clear	Objective	Practical	Overall
Research and Analytical Papers	4	3	3	3	3	3	3
• Urban Only	4	4	4	4	3	3	4
• Rural and Small Towns Only	3	3	3	3	3	3	3
Sectoral and Economic Work	4	4	4	4	3	4	4
Project Appraisal Documents	4	3	4	4	3	N/A	4
• Urban Only	4	4	4	3	4	N/A	4
• Rural and Small Towns Only	4	1	4	4	3	3	3
Conference Documents	4	3	3	3	2	2	3

Notes: Scoring: 1 to 4, where 4 is the highest.

Relevant: Was the information, analysis, and advice in the document relevant to the client’s issue?

Comprehensive: Was the information, analysis, and advice in the document appropriately comprehensive?

Knowledgeable: Did the document provide the client with the best and most up-to-date knowledge on the issue (including from sources outside the Bank)?

Clear: Were the ideas and recommendations in the document stated clearly?

Objective: Did the document present information in an objective manner (indicating, where pertinent, differences that exist in ideas and approaches)?

Practical: Did the document provide practical advice to decision-makers?

Overall: Un-weighted mean of scores on six questions/criteria.

2.4.3 UNESCO Medium Term Strategy for 2008-2013: Objectives 2 and 5

69 UNESCO state that their strategy is structured around five programme-driven overarching objectives (UNESCO 2008):

- Objective 1: “Attaining quality education for all and lifelong learning”;
- Objective 2: “Mobilizing scientific knowledge and policy for sustainable Development”;
- Objective 3: “Addressing emerging social and ethical challenges”;
- Objective 4: “Fostering cultural diversity, intercultural dialogue and a culture of peace”;
- Objective 5: “Building inclusive knowledge societies through information and communication”.

70 Objectives 2 and 5 are specifically relevant to RIU across all subject areas. In addition, under Objective 3, *“Leveraging scientific knowledge for the benefit of the environment and the management of natural resources”, “UNESCO will advise governments on the integration of social and cultural aspects and in particular, traditional knowledge, heritage, educational dimensions and institutional capacity building into the management of freshwater, marine and terrestrial eco-systems.”*

71 In the water arena, UNESCO’s strategy document states that: *“In the field of hydrology, UNESCO will provide policy advice and support for capacity-building by reinforcing synergies between its different programmes, in particular the International Hydrological Programme (IHP) and other entities, such as category 2 centres, and promote effective strategies for joint purposeful action.” “Other significant actions will also be taken: support for national strategies to improve water resource management and access to water; the promotion of sustainable management of natural resources and protection of the environment; the use of digital technologies and the sharing of knowledge; and the promotion of peace, as an essential condition for development.”*

2.4.4 SPLASH-Net

72 SPLASH-Net is the name of the European Union Water Initiative European Research Area Network (EUWI Era-Net). SPLASH is programmed for a period of 48 months from January 2006, to implement a framework through which European partners can work together more effectively (<http://www.splash-era.net>). SPLASH is a consortium of 15 ministries, funding agencies and national research and technological development authorities from 11 European countries, aiming to improve water research for poverty reduction and to contribute to achieving the MDGs. SPLASH is funded by the EC and is coordinated by DFID. Its geographic focus is the Mekong region of Asia and Africa (including the Mediterranean countries). SPLASH is undertaking a collaborative work programme involving both SPLASH European partner organisations and stakeholders and will:

- Coordinate existing programmes to minimise duplication and identify gaps by initially compiling information on European partner water research funding;
- Design collaborative research programmes which address identified needs by working with developing country partners in identifying their priorities for water-related research;
- Speed up knowledge transfer between researchers and practitioners by establishing tools (web portals, reports, workshops, and review meetings) to enable more efficient sharing of information between researchers, policy makers and practitioners;
- Map good research management to maximise use of resources;
- Support transfer of research into practice.

73 SPLASH prepared a synthesis report reviewing national water and sanitation research programmes in developing countries (SPLASH 2008). In the Review, sanitation is included with water supply as part of ‘water for people’ theme rather than as a separate theme. Health and hygiene promotion is also included as a separate sub-theme under

'Water for People'. Nine (9) countries participating in SPLASH fund 26 water supply and sanitation research projects, out of which 16 projects have health and hygiene components.

- 74 As part of their RIU, SPLASH organised an e-conference to find out where research has been successfully (and less successfully) incorporated into sector policy (SPLASH 2008). The main conclusions of the e-conference were that there is a clear need for a deeper and broader level of understanding at the national level of the processes involved in policy making and strategy development by the two distinct groups identified in the e-conference - the research community and the policy makers. A further level of investigation would be for researchers and policy makers to address:
- The processes for identifying and capturing research issues of national importance and relevance;
 - The processes for capturing and incorporating global and regional trends in policy and strategy;
 - The processes for maintaining an awareness of the wider stage and those research findings that have already proved to be relevant at this level.
- 75 One of the collaborative research programmes being developed by SPLASH is on RIU (SPLASH-Net 2008). The general objectives of the research programme are *"To accelerate the progress towards the production and uptake of technologies, policy and governance that will contribute to poverty reduction and the achievement of the water, sanitation and hygiene MDG targets"*. The overall specific objective is *"To maximise the potential impact of existing member States research"*.
- 76 Several SPLASH partners including DFID have expressed an interest in funding the proposed programme and are working out the modalities of joint funding. The estimated budget for the programme is Euro 2 million and contributors will be restricted to a maximum funding of Euro 0.5 million.

2.4.5 DFID RNRRS RIU Programme Mid-term Review

- 77 The Renewable Natural Resources Research Strategy (RNRRS) Research into Use (RIU) programme is a response to recommendations from evaluation of DFID's earlier £220 million investment in the Renewable Natural Resources Research Strategy (RNRRS), which found limited impact from the research. RIU commenced in July 2006, with a budget of £37.5 million, only a part of which is for water, and a Purpose to: *"Maximize the poverty reducing impact of RNRRS and other research and, by doing so, significantly increase understanding of how the promotion and widespread use of research can contribute to poverty reduction and economic growth."*
- 78 After an extended Inception Phase, RIU entered implementation with a structure of three Outputs, split into seven Components:
- Output 1 (£16.5 million): putting research into use (Components: improving the access to RNRRS and other research outputs [Innovation Challenge Funds]; enhancing demand for RNRRS and other research outputs [country programmes]; developing enterprises using RNRRS and other research outputs);
 - Output 2 (£8.2 million): learning about getting research into use (Components: monitoring and evaluation support and synthesis; impact evaluation);
 - Output 3 (£4.1 million): lessons having policy impact. (Components: influencing the agenda of national, regional and global partners; communications with the global professional community).
- 79 RIU, as a research programme, has developed a central hypothesis: *"An innovation systems approach will prove more effective than linear approaches at getting research outputs into use for the benefit of the poor"*.

80 The mid term review for this programme is currently being finalised. Some of the provisional findings of the report are discussed in Section 5.4.

2.4.6 DFID's Strategy for Research on Sustainable Agriculture

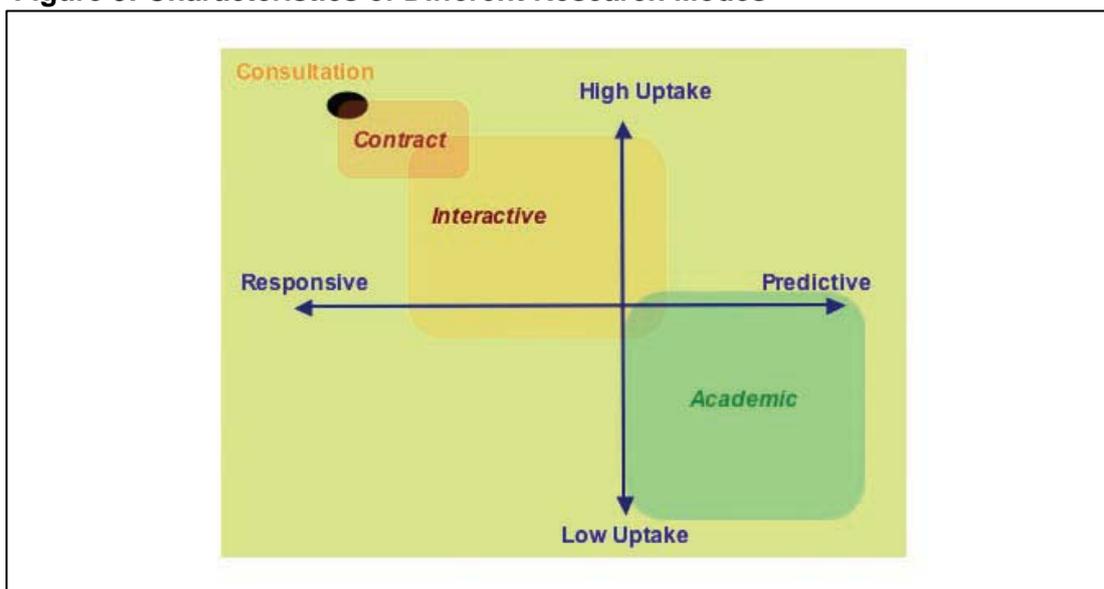
81 DFID's Working Paper on Sustainable Agriculture and Renewable Natural Resources (DFID 2008) is one of a series of 10 papers published alongside DFID's Research Strategy 2008-2013. In their on-line summary DFID state that they "*will continue to support agricultural research by ensuring [it] provides for a balance between basic science, translational and adaptive research, and programmes to get research into use.*" DFID is committed to doubling funding on agriculture, fisheries and forestry to £80 million per annum by 2010. Nine new research themes are identified: productivity-enhancing technology including: agriculture and climate change; and water and its management. Research and RIU for agriculture (water for food) are clearly high on DFID's agenda.

2.4.7 FAO / IPTRID Review of Research Uptake in Egypt

82 In their study of irrigation and drainage research uptake in Egypt (IPTRID 2007), the International Programme for Technical Research in Irrigation and Drainage (IPTRID) identified three modes of research with varying degrees of uptake (see Figure 3):

- **Interactive mode** refers to a style of activity where researchers, funding agencies and 'user groups' interact throughout the entire research process, including the definition of the research agenda, project selection, project execution and the application of research insights. Research users may include policymakers, planners, business and governmental or non-governmental organizations.
- **Academic mode** refers to a style of activity where research agendas are defined by academics themselves. Funding mechanisms are driven by academic curiosity, disciplinary values and traditional peer review undertaken by applicants' academic 'peers'.
- **Contract mode** refers to a style of activity where researchers in universities and other institutions already 'interact' directly with users, such as government departments, by accepting contracts to undertake specific pieces of research or by serving in advisory capacities.

Figure 3: Characteristics of Different Research Modes



- 83 Some of IPTRID's findings are informative for the water for food aspects of the current study:
- Research is taken up into practice but often over decades rather than years;
 - Successful uptake of policy findings in Egypt was attributed to the close alignment between research organisations and their ministerial counterparts;
 - Successful research was generally undertaken as "interactive" research and was championed by senior staff in both the research organisation and the end user's organisation;
 - Successful uptake of practical end user applications sometimes required several different approaches including legislation and the formation of farmer level organisations (see comments about the A, B, C, D, E approach later in this report).
 - The main constraints were found to be financial resources, the fast rotation of personnel and few incentives to researchers to remain in government research agencies.
- 84 Whilst it is recognised that Egypt has some of the strongest research organisations in the South, it is worth noting that this review was undertaken by the research organisations involved in the work. This is a practice which has been commented on by several of the respondents in this study, who have said that there needs to be a clear separation between doing and assessing; i.e., there should be a separation between undertaking research and assessing the results of that research; likewise between RIU and lessons learned from RIU. However the in-depth knowledge of the researchers should be captured and not be ignored in any review.

2.4.8 IWMI Water for Food, Water for Life

- 85 The International Water Management Institute (IWMI) prepared a comprehensive Assessment of Water Management in Agriculture (IWMI 2007). It was a major piece of work which was 5 years in the preparation, involving organisations, individual specialists and policy makers from around the world. As such, it provides a comprehensive overview of the "water for food" theme and should be referred to in this current scoping study, in particular, when deciding which topics to concentrate any RIU programme in.
- 86 Eight policy actions were identified by this report:
- Change the way we think about water and agriculture;
 - Fight poverty by improving access to agricultural water and its use;
 - Manage agriculture to enhance ecosystem service;
 - Increase the productivity of water;
 - Upgrade rain-fed systems – a little water can go a long way;
 - Adapt yesterday's irrigation to tomorrow's needs;
 - Reform the reform process – targeting state institutions;
 - Deal with tradeoffs and make difficult choices.

2.4.9 Ongoing Work in Water for Food: IWMI and CGIAR

- 87 IWMI and CGIAR have a Knowledge Sharing in Research (KSiR) programme, which offers a vast array of information, documents, reports, etc., through their web sites.
- 88 An essential part of the CGIAR mandate requires that the outputs of its research – data, information, knowledge – are preserved for posterity by attending to their long-term accessibility. It is critical to ensure that the knowledge or outputs this research produces is put to the best possible use. Using the same philosophy that questions how a crop grown in a lab can feed a hungry person, the issue here is to find the pathway that will

take research information off library shelves and out of hard drives and make sure it is available to its intended users – be they policy makers, researchers, extensionists or the farmers themselves.

- 89 The research outputs of the CGIAR are not intrinsically international public goods; they must be made so intentionally. This requires front-end design and planning of research in a way that guarantees its outputs are available, accessible and in a form that can be taken up and applied by others. The Triple-A approach to research, Available, Accessible and Applicable, proposes that each individual research output, even if it is location specific, has generic appeal and can be assembled, created, handled and disseminated to ensure it reaches its intended audience.
- 90 The CGIAR ICT-KM Program has developed a plan to assist the CGIAR Centres in taking the steps necessary to ensure that all outputs from their research become international public goods, in other words, they meet the Triple-A test.
- 91 There are many ways in which the public character of a research output can be limited by decisions taken regarding its dissemination. A classic example is publicly funded research outputs that are disseminated in limited-access scientific journals and, thus, explicitly exclude some classes of potential users, or are available only on Web sites that are less accessible to those without good Web access. A similar case can be made for outputs available in one language only, written in highly technical language that does not serve all potential user groups, published in a proprietary format or with restricted intellectual property licenses.

2.4.10 EU Development Funding for the Water Sector in Africa

- 92 In the report “Working Together to Improve Aid Effectiveness in the Water Sector” (EUWI-Africa and IRC WSC 2008) it was identified that for EU countries “*general budget support [was] becoming the preferred funding channel for their aid allocations*”, with 29% of funding being allocated to this type of investment. This is a demand-led approach, and the implication for DFID would be that, if they were to follow the EU model, the RIU funds would be determined locally and come through DFID country programmes.

2.4.11 On-going Sanitation Research Programmes and Projects

- 93 A wide ranging discussion of Sanitation research, much of which concerns RIU, is given in the Scoping Study for Sanitation Research. Please see that report for the description and findings.
- 94 A wide ranging discussion of Sanitation research, much of which concerns RIU, is given in the Scoping Study for Sanitation Research. Please see that report for the description and findings.

2.5 Observations

- 95 The on-going RIU work reviewed here takes a wide range of approaches from a simple database of existing reports to training and strengthening programmes for research institutions. It is a very broad subject area and the literature on “innovation systems” suggests that all the components have to be in place, supported and active for successful and sustainable outcomes; in particular, the stakeholders must be able, capable and willing to participate.
- 96 The scope of this RIU programme is very broad (water, sanitation and hygiene) and it is suggested that within the funding constraints it will be important to focus on just a few topics if it is to fulfil the requirements of success and sustainability.

3 GENDER, SOCIAL INCLUSION, AND POVERTY

3.1 Introduction – why is Gender Side-Lined

- 97 *“While donors echo the international policy commitments to gender equity and water for all, and see water programmes as entry points for empowering women in communities, the dominant focus in practice is on the provision of water through engineering solutions. Gender is usually ‘tagged-on’, and the big challenges of understanding complex social realities and grappling with social change are sidelined.”* IIDS, 2003¹².
- 98 The SPLASH synthesis report demonstrates that across the water for development research programmes reviewed, including sanitation, attention to gender issues was minimal (SPLASH 2008). A similar finding is reported in van der Voorden & Eales (2002) from South Africa. Sanitation policy documents of South Africa have almost nothing to say about women and gender despite the fact that South Africa has one of the most progressive Constitution’s in the world, and her Bill of Rights makes special provision for safeguarding women’s rights and addressing their needs (p.2). This omission is curious, especially for sanitation, where there is such wide spread recognition of the significance of gender within the literature. This literature includes assessments of household sanitation programmes that have demonstrated why gender sensitive implementation, specifically incorporating active engagement of women, can improve chances of sustainability and therefore delivering health outcomes. The “curious” absence of gender is very largely due to the limited effective engagement of sanitation experts and gender experts, the institutions they work in, the journals they write in, the Ministries they work under, and the frameworks they bring to their theory and practice. This problem of connecting perspectives is partly disciplinary. Several papers reviewed have underlined the need for better communication between the engineers developing designs and social scientists working with implementing programmes that are trying to be inclusive and responsive to felt needs (for example, Smout & Parry-Jones, 1999; WaterAid, 1999; GWA, UNDP, 2006). Part of the problem faced is that they work at different levels with the engineers linked to national research institutes and Ministries whereas the gender-sensitive implementation specialists usually work with the NGOs at the community level. Another problem identified by Smout & Parry-Jones (1999) is a lack of user-friendly gender mainstreaming guides for engineers working in the water and sanitation sector.

3.2 Gender Mainstreaming Best Practice

- 99 Moreover, most of the evidence supporting the arguments for gender sensitivity are based on case studies and lack “scientific” rigour, further contributing to the disconnect. However, the case study evidence base is now becoming quite large. The United Nations handbook on case studies on best practices represents a set of 15 case studies on gender mainstreaming in the water and sanitation sector. This handbook is meant to provide information, insight and evidence of how gender mainstreaming works in practice in many diverse situations. The best practices depicted are a contribution towards closing the gaps that are evident in the implementation of interventions to promote gender equality (United Nations 2006). Strengthening the evidence base to improve understanding of how gender mainstreaming effects sanitation outcomes should be an RIU priority.

3.3 Gender in Water Supply and Sanitation

- 100 The vital role of women in water, sanitation and hygiene (WASH) interventions is undeniable. But even though women’s involvement in the planning, design, management and implementation of such projects and programmes has proved to be fruitful and cost-effective, the substantial benefits of this approach are not properly recognised. One result is that, all too often, women are not as centrally engaged in water and sanitation efforts as they should be (WSSCC, 2006). Most material concerning

¹² p6 DFID-funded research project number R6575.

gender issues in water and sanitation relates to water supply, and most writing on sanitation pays little attention to gender issues (IIDS not dated). Within water sector research, sanitation has been termed the Cinderella because of its neglect despite its enormous potential. Within sanitation programming, lack of attention to gender has been referred to as the missing slipper which could transform this Cinderella sector and realise the significant health and poverty reduction gains that are possible through improved sanitation (IRC, 1998). This fable suggests a core role for gender mainstreaming and that failure to do so will diminish the prospects of successful research-into-use. But it also suggests that there is tremendous opportunity for a new research-into-use programme to address the factors that have contributed to the past failure to mainstream gender in sanitation programme design.

3.4 Identifying Demand

101 Gender mainstreaming is particularly important to improve sanitation, as discussed further below, and is central to proper analysis of household level demand. A main point emerging from review of EngKar was that there was a focus of research on the supply side and it was often not sufficiently detailed for specific local application. Demand side constraints and approaches to overcome these constraints need to be adequately incorporated in the RIU programme.

102 To the extent that the demand side has been addressed, centrally-based researchers have tended to focus on central policy processes. However, these demand side issues operate at several levels and perhaps the most important level is the household. If household demand for improved sanitation is identified primarily through men there is considerable risk that true effective demand is not being captured. Needs for sanitation are intimately associated with women due to gender specific needs; access to adequate and sanitary latrines is a matter of security, privacy, and human dignity, particularly for women (DFID 2008). Men are likely to value improved sanitation but it may not be as much of a priority for them as it is for women. Of course, context is important and cultural differences matter but, with their family and home responsibilities, women often benefit more than men from improved sanitation. But if market or community led approaches do not capture adequately women's "voice" and "choice" on sanitation then their demand remains unexpressed or latent. Men exercise control over resources so, while women may be motivated to improve household sanitation, it is men who often make decisions regarding land use, investment, finances and access to credit (UN WATER 2006). Where these gender differences prevail research-into-use can benefit hugely from effective inclusion of women in identifying the characteristics – price and product – of demand for improved sanitation.

Box 1: Women Led Total Sanitation in Maharashtra, India¹³

Remotely located Sahara village has earned recognition through an award as the first 'open defecation free' village from the State Government of Maharashtra. This improved status and subsequent appreciation of the village is an outcome of ingenuous efforts of four women's Self-Help Groups (SHGs) formed in 2001, when UNICEF began to work with the community. The intervention, based on empowering communities, energized the women to bring about a dramatic and positive change on a wide range of concerns in their lives from school attendance and alcohol consumption to improving the village approach road. The SHG women decided to take up the cause of clean and open-defecation free village in April 2005. Their plan began with each group contributing Rs. 500 - the total amount of Rs. 2000 was utilized as working capital to purchase basic materials to construct toilets. The group also provided speedy credit to its members willing to build toilets. Even poor households put up a makeshift toilet within their tiny budget. The expense for construction per toilet ranged from Rs. 300 to Rs. 1500. The SHG women understood that any behavioural change is even more difficult to sustain than to initiate. Therefore they evolved a system of community monitoring - the women frequently visited houses to ensure proper usage and maintenance of toilets and appointed a village senior for two months to watch and warn people against open defecation.

¹³ Source: http://www.unicef.org/india/wes_1364.htm

3.5 Gender Awareness during RIU

103 Gender mainstreaming has been identified as particularly significant within demand due to differences in demand between men and women and the importance of women in the implementation of sanitation. However, this emphasis upon women must not be misinterpreted; gender mainstreaming requires careful understanding of how both men and women are involved in improved sanitation. At the community level, hygiene and sanitation are considered a women's issue, but they impact on both genders. Seeing sanitation as the women's domain also runs the risk that women alone will increase their work burdens, emptying toilets and pits, etc., if programming (IIDS, 2006) is insensitive and, within the community, if gender sensitivity amongst men and boys is not strengthened. Yet societal barriers continually restrict women's involvement in decisions regarding sanitation improvement programmes. Thus, it is important that sanitation and hygiene promotion and education are perceived as a concern for women, men and children and not only for women. Separate communication channels, materials, and approaches have to be developed to reach out to men and boys alongside with women and girls. It is also important to target community leaders for gender sensitization; this would facilitate mainstreaming gender in sanitation and hygiene promotional activities (GWA, UNDP 2006).

3.6 Monitoring & Evaluation

104 The RIU programme needs to ensure that appropriate monitoring and evaluation of these demand side factors is an integral part of implementation programme design. Such monitoring should pay more attention to the different dimensions of poverty, and exclusion affecting poor households and women and children in particular. Moreover, improving performance and learning requires that the M & E system has feedback loops to research, and uses impact assessment studies to inform and improve future research-into- use projects.

3.7 Social Exclusion

105 Social inclusion is important in promoting improved sanitation because within the community failure to achieve ODF will constrain the health benefits for all community members from improved sanitation. For this reason, social inclusion is a public good. Even if this were not the case, DFID is committed to social inclusion specially the extreme poor, and achievement of MDG 7 target 10. Therefore, RIU must energetically pursue comprehensive community adoption and sustained use of improved sanitation. For the extreme poor, their survival needs take all their efforts and improved sanitation is not prioritised. One particular concern about inclusion of the poor in demand responsive sanitation projects is that poor communities and households can end up being excluded. Some communities may get left out largely due to their physical isolation even though they are enthusiastic about investing in improved sanitation provisions (Deverill & Smout 2000). An implication for an effective RIU is that pure market based approaches will not reach the poorest and that social marketing or community based approaches will need targeted mechanisms to engender demand. There may also be opportunities for sanitation programmes to work with social protection programmes to promote improved sanitation practice amongst the extreme poor (GTZ, 2007).

3.8 Demand Feedback Loops in RIU

106 Addressing the problems of effective integration of the demand and supply side has been a constant challenge for RIU. As discussed in Section 2.3 in this document, modern innovation theory emphasizes: multi-functionality; collective intelligence; interconnectedness of scale; and, increasing rate and nonlinearity of change. Such theory underscores the importance of learning from multiple sources and clustering of knowledge in effective RIU. This thinking has been further developed with the concept of translational research which envisages feedback loops from the demand side to the

supply side¹⁴. This idea is particularly important in developing effective mechanisms for implementing improved sanitation programmes that are sensitive to sometimes quite complex and context specific demand considerations. These considerations are likely to include differences in demand related to wealth, gender, age and sometimes religion, ethnicity and culture.

107 For the RIU to be successful in integrating supply with these demand considerations, development of effective partnerships at country and lower levels will obviously be important. Such partnerships must involve local implementing bodies which are explicitly addressing gender mainstreaming, social inclusion, and poverty. Furthermore, these partnerships must involve equal voice for those partners whose strengths lie in the social development dimensions of improved sanitation if they are to successfully challenge the culture of supply side domination.

3.9 Gender and Social Policies in RIU

108 A review of sanitation policy contents of nine countries (WEDC 2005) has observed that while social aspects may dominate in the wording of policy, the allocation of budgets, roles & responsibilities, together with specific aspects relating to hygiene education, are not clearly identified. The concern for social aspects may therefore be more theoretical, responding to perceptions of current best practice, rather than enabling action at the community or household level.

109 Incorporation of gender has to be mainstreamed across the RIU but it will depend upon specific national context how this should be done. National policies may often refer to the importance of gender mainstreaming but the policies may not be reflected in practice. In building effective partnership, the RIU programme should give priority to those national institutions and other local stakeholders working on gender. A cautionary note from the DFID-funded Gender Issues in the Management of Water Projects in Nepal and North India (IIDS R6575) is that there is often a wide gulf between policy and practice, even in organisations that appear to be gender-sensitive. Much needs to be done to enable water projects to have an effective and sustainable impact on the lives of both women and men.

¹⁴ <http://r4dconsult.wordpress.com/2008/12/10/translating-and-adapting-research/>

4 CONSULTATION WITH STAKEHOLDERS

4.1 Consultation Process and Scope

110 The consultation process aimed to ask a number of leading questions of a cross section of stakeholders in the water and sanitation area:

- What should be the priority themes and topics for Water and Sanitation Research-into-Use Programme and why?
- What are examples with details if known (topic, country processes, references etc.) where the outputs of water and sanitation research have influenced outcomes both successfully and unsuccessfully?
- What are the key methods and/or constraints influencing success or failure of Research-into-Use of water and sanitation research and knowledge?
- How should different stakeholders (for example researchers, funders, policy makers and end-users) be involved in the implementation of the Research-into-Use Programme?

111 Three supplementary questions were added part way through the consultation process to help discussion around the methodology and scope of the RIU programme.

- How should the Water & Sanitation Research into Use Programme be implemented and managed?
- Should the RIU programme also seek to ensure that future research is planned and executed in such a way that results will be effectively disseminated and used?
- Should the RIU programme also seek to set up means by which research results from any source can be mediated to likely users, not just results from DFID-funded research?

112 The consultation process included preparation and distribution of a Discussion Note and questionnaire, plus interviews and e-mail exchanges with key staff from different stakeholders representing different sectors and interests. Face-to-face and telephone consultations were held with some stakeholders to further develop these ideas, and ensure that the findings of the Scoping Study are based on analysis of a wide range of opinions.

113 The purpose of the Discussion Note is to describe the Scoping Study and to stimulate discussion and to seek views on the key aspects of the possible DFID funding Water & Sanitation RIU Programme. The purpose of the questionnaire was to collect stakeholder responses in a structured format and to provide an aid memoire during discussions.

114 The list of people who were contacted and who responded is given in Appendix B and the questionnaire is given in Appendix C. The resources and time available to the Scoping Team during this Initial Phase limited the extent of consultation such that most replies were received from UK based stakeholders with only a limited number from potential end-users and overseas researchers.

4.2 Consultation Findings

4.2.1 What should be the Priority Themes and Topics for Water and Sanitation Research-into-Use Programme and why?

115 Most of the respondents identified Water for People (including sanitation) as being the most important theme for the RIU programme, although some identified water for Food as being important, given food shortages and the large volumes of water used by irrigation (about 75% of the water consumption worldwide).

116 Under this question, some respondents took the opportunity to discuss broader issues related to RIU including:

- There has been an abundance of research for policy (though of varying quality); limited research for fundamental knowledge (blue skies thinking that has seldom been appropriately addressed) and negligible research for practitioners (how to solve a particular problem) especially when it comes to developing leadership in low income countries;
- It is often quite difficult to know if, and to what extent, research outputs have been taken into use, particularly, when they are made widely and freely available (for instance via a searchable internet resource like Practical Action's "practicalanswers" site (<http://practicalaction.org/practicalanswers/>));
- Some EngKaR knowledge is simply interesting in its own right and deserves to be made more accessible - but not put "into use";
- Often there seemed to be a need for further development or adaptation of findings before they can be applied. For example, the outputs of a project on irrigation charging were not something that can immediately be put into use through some form of dissemination programme. Another example was irrigation finance, which was well-covered by the EngKaR programme but had not been developed far enough to influence policy in a practical way - further work needs to be done to make it 'implementable';
- In many cases the long interval between the research and the RIU meant that much had changed in the mean time which affected either the research or the context in which it was relevant;
- One respondent said that some EngKaR efforts had produced good publications and built capacity in various countries; some resources should be devoted to informing people about what is already available, perhaps with help from the British Council and from DFID offices in relevant countries.

117 Some respondents were very specific about the knowledge required within the themes, including:

- In many countries, the problem with water and sanitation is the inability of service delivery systems to provide the services that people want and need. RIU must therefore consider very carefully the supply side: capacity, capability, skills, finance, etc., to be able to a) deliver the new technology on the ground and b) at a scale that has a significant impact on the desired outcomes;
- "Appropriate sanitation", where research and its application need to be applied not just to technical issues but to institutional and economic ones, which 'can undermine even the best technical system';
- The connection between health and the provision/adoption of sanitation is self-evident, however, the proof may have to be re-packaged and "sold" to politicians and policy makers before sanitation becomes a priority. In addition to the links between sanitation and prevention of diarrhoea, it will be important to show the benefits to other outcomes, for example; nutrition and child development. In this respect one respondent considered RIU into policy for water supply and sanitation to be the highest priorities;
- Another respondent pressed the need for end-users to develop coping strategies to face droughts and water shortages ... *"developing coping strategies needs intimate involvement of end users in the process ... a 'mushroom' effect with a gradual spread of knowledge and experience passed on to neighbouring areas and possibly beyond, but partly driven by the local people."*
- The management unit for water should be the river basin or groundwater basin sink; hence, when dealing with water resource management, thinking should be

regionally across the boundaries of several countries. In fact, trans-boundary issues were one of the areas of interest suggested by a number of the respondents.

118 Concerning the selection of topics especially relevant to the MDGs, one respondent pointed out that water affects several MDGs but is not uniquely covered by a single goal. Poverty and extreme poverty (MDG1) are influenced by water for agriculture, fisheries etc, but the water aspects of this goal are not adequately covered.

4.2.2 What are Examples with Details if known (Topic, Country Processes, References, etc.) where the Outputs of Water and Sanitation Research have influenced Outcomes both successfully and unsuccessfully?

119 Several respondents gave examples of where RIU had been successful, including:

DFID-funded research:

- Research on Sustainable hand pump project in Africa influenced operation and maintenance approach/strategy in Zambia;
- Research on Improvement of traditional water sources influenced adoption of self-supply approach to rural water supply in several countries including Ethiopia, Uganda, Zambia;
- Research on Water and Sanitation and Disabled People has influenced implementation strategies in Africa and Asia;
- Research on Plastic slabs resulted in their being used by agencies in emergency situations;
- Research on relative importance of water supply, sanitation, hand washing resulted in more action on hand-washing, which has influenced donor policies;
- Increased profile of sanitation and point of use water technology;
- Research into drivers of change – led to TLCS;
- Research into water and sanitation in schools has led to campaigns to ensure that schools have good facilities;
- Gender sensitive Irrigation Design research (KaR R 6876) was extended to produce the illustrated booklet 'Don't get lazy!' and the accompanying workbook. The materials were also available on Disc. Subsequent workshop was run in Northern province with co-operation from the Department of Agriculture for 60 NP extension staff;
- Environmental Checklist for Irrigation and Drainage has been widely used in irrigation, drainage and water resource projects and programmes in many countries including India, Pakistan, South Africa;
- Research developed the guidelines for IWRM. These guidelines have been taken up at high level by governments in many countries;
- Research on sedimentation- that water systems – principally canals, off-takes and reservoirs do not become unworkable because of excessive sediment deposition used in many countries including India, Pakistan, China, FSU-CAS;
- Research on spate irrigation widely used to develop and manage spate systems in Yemen and ME/African (Eritrea, Ethiopia) water short countries.

Research funded by others:

- Groundwater mitigation strategies in peri-urban Lusaka have led to a revision of government strategy for cholera prevention. (UNICEF);
- Small-holder irrigation and treadle pumps in Africa (IPTRID);

- Irrigation and drainage research and technology being included in National Action plans for technology transfer and adaptation in several countries including Indonesia, Sri Lanka, South Africa and Jordan (IPTRID);
- Virtual water concept (pioneered by Tony Allan) has become part of the global policy debate and used widely was generated by research and now people think differently about water resources. Reportedly, DFID were not enthused by this research and it was funded / undertaken separately.

120 Some correspondents provide reasons why research into use had not been successful, including:

- Lack of appropriately funds limits the benefits derived from what are perceived to be successful research projects; for example, successful dissemination of an EngKaR project in Brazil was not possible as DFID was not prepared to provide even limited funding for post-project, locally driven, activities;
- Look at the model of Water Research Commission in South Africa as an interesting way in which research is aligned to needs and bridged to policy.

4.2.3 What are the key Methods and/or Constraints influencing Success or Failure of Research-into-Use of Water and Sanitation Research and Knowledge?

121 Most respondents emphasised the need to view research and RIU programmes as long-term commitments for there to be uptake into use and for the impacts to be sustainable. Duration of RIU programme should be at least five years and probably up to ten years to be fruitful, as long term gains in research up-take require the development of in-country institutional memory and policies. To this end, host country research institutions need strengthening and long term relationships between them and UK (and other) institutions must be developed. One organisation working on research and uptake of pro-poor technology said they had found that work extending over several countries for at least ten years was most fruitful¹⁵;

122 Concerning methods and modalities for the RIU Programme, one respondent observed that most EngKaR outputs comprise small bits of information, which contribute to an overall body of knowledge of the wider topic so often cannot be put 'into use' on their own, and yet dealing with the wider context might be too large for an RIU programme. What was needed was *"almost a marketing exercise, reworking related project outputs into a series of related briefing papers (which would then have to incorporate other relevant research) and then 'selling' them to donors and governments"*.

4.2.4 How should different Stakeholders be involved in the Implementation of the Research-into-Use Programme?

123 There was consensus amongst respondents that RIU must be demand led and involve southern end-users and institutions, whether research organisations, government or non-government organisations.

124 Several respondents observed that research can be considered as falling into one of three categories and that different RIU approaches are needed for each:

- Research for policy;
- Research for fundamental knowledge (blue skies thinking);
- Research for practitioners (how to solve a particular problem).

125 To this list one might add "Experimental Development" in the form of pilot studies, action research and applied research projects.

¹⁵ In RNRRS RIU there was a similar finding that the most useful research came from a cluster of projects over a number of (3 year) project cycles, with the later projects delivering the most value.

126 Typical responses were:

- RIU for development must involve demand from the host country, and preferably from specific groups of potential end users;
- The role of end-users should be seen as pivotal, not just in terms of implementation at end-user scale, but also through involvement of selected end-users of the research in wider scale dissemination, and sometimes in the design of the research itself. Short term gains can be achieved through end-user-focused RIU, action research and pilot projects;
- A crucial element of any RIU effort is “the last mile”: how to get the knowledge to the grassroots people, particularly vulnerable groups such as households headed by women or disabled people, in either urban or rural contexts, who can use it at scale; partnerships with local organisations like NGOs can help here, translating the research knowledge into something understandable by the end users, as can various types of media (with a preference for audiovisual), and in a few cases perhaps the utilities;
- The importance of stakeholder attitudes was also emphasised: for research or RIU efforts to succeed every stakeholder must see his or her own priorities addressed, not just those that project designers thought were relevant.

4.2.5 How should the Water & Sanitation Research into Use Programme be implemented and managed?

127 Most respondents tended to focus on specific aspects of the implementation and management of RIU programme and responses, although some mentioned some form of consortium, with a mix of Europe-based and Southern organisations with strength in water and communications. Some of the specific points mentioned included:

- Some sort of question-and-answer service may be needed to help with any misunderstanding or doubts that arise, or with the adaptation of the knowledge to local contexts;
- Management needs to be active enough that those working on RIU projects can discuss progress and problems with the programme managers, with a link both to policy division and country offices of DFID;
- The RIU Programme should not be limited to countries where DFID is active in that particular sector, as that would be unduly restrictive and limit the dissemination, but the disconnect encountered between country office and researchers on the EngKaR programmes should be avoided, and a link with policy division is also needed;
- DFID should beware of unrealistic expectations about how much can be achieved with too few/little resources;
- Before existing EngKaR knowledge can be operationalised it needs to go through a two stage check:
 - Is it supported by current thinking and more recent research?
 - Is there a current demand for it and is it appropriate in the host country and community?
- RIU requires a structure to operate under if it is to be sustainable. One respondent described this as the A, B, C, D, E process:
 - A) ANALYSIS of the facts;
 - B) BARGAINING - the political process in which interest groups (users, sectors, special interest groups, etc.) lobby politicians who set the guidelines and policies;

- C) CODIFICATION - Legislation of water rights, rules and procedures for allocating water in times of scarcity and excess;
- D) DELEGATION - Establishment of the agencies and institutions to implement the water allocation procedures along with appropriate financial resources;
- E) ENGINEERING - Constructing, operating and maintaining the infrastructure required to deliver the water services implicit in the agreed laws by the established institutions and agencies

128 Concerning the way RIU work is procured, one respondent considered that a requirement for co-financing (for example, amounting to 30 %) is unreasonably prescriptive. It tends to limit access to a very small range of organisations - typically universities, who are not necessarily the best people for communicating research, and some NGOs who have independent fund-raising capabilities or can cross-fund several simultaneous proposals.

129 Commenting on the IPTRID findings about successful research being undertaken as “interactive” research with “champions” at senior level in the research organisation and the end user’s organisation (see Section 2.4.7), one respondent suggested that: the research (and RIU) contracts need to be flexible, to allow changes to be made as the project progresses. In the case of the proposed RIU programme, who would be the interacting partner on the “end user’s” side? The end-users in this situation are the people and organisations who are implementing and directly using the research findings; i.e., not the rural and urban poor who are the beneficiaries of the programme. Presumably, this will require that the RIU champions are identified by the national partners in the RIU programme management team and DFID field staff who have knowledge of what is going on in their countries.

130 The need for flexibility was emphasised, particularly to respond to local wishes and priorities: *“If a donor wants to support a participatory process, then he should not ask the project writing team to determine in advance, for what the action-oriented funds will be used.”*

4.2.6 Other Supplementary Questions

131 It was suggested that, as allowed for in the wording of the prescribed scope of the RIU Programme, results from DFID-funded projects other than nominal “research” could also be disseminated through an RIU programme.¹⁶ The combination of small theoretical studies and an attempt at province, or nation-wide implementation could be very informative in putting the research into use.

132 Similarly, some respondents felt that the RIU Programme should disseminate and seek to apply any relevant knowledge and not just that derived from DFID funded work; collaboration with other donors and organisations would help.

133 Some activities covered by the EngKaR programme were also the subject of other research and implementation programmes. One respondent said that, provided there is a link to the EngKaR programme, these other research findings should also be covered - the EngKaR programme finished some time ago and there have been many developments since.

4.3 Observations

134 There are a number of key messages coming from the consultations:

- Research and RIU are long term investments;
- RIU does not always follow directly from the research and there is often a significant time delay before research findings are adopted;

¹⁶ An example of such a DFID project producing potentially valuable knowledge is WRDMAP in China, which involves topics that have been researched in some way or other through EngKaR.

- Some research knowledge (including EngKaR knowledge) whilst valuable, will not produce the desired outcomes on their own and will need to be bundled or clustered with other knowledge;
- Despite the fact that water supply, sanitation and hygiene use a relatively small percentage of the available water this was considered a very high priority area by most respondents;
- EngKaR knowledge is now several years old and will need to be reviewed and updated before it can be rolled out into use;
- Successful RIU involves a range of stakeholders requiring a range of tailored communication methods and messages;
- Champions in each stakeholder group are necessary for sustainability;
- Creating wide-scale demand from secondary stakeholders, in particular the end users of any technology or system, was seen as key to achieving up-take at scale. In this context use of mass media was considered essential;
- Strengthening the ability, capacity and involvement of southern research institutions should be an important part of any RIU programme; in particular, their ability to retain high calibre staff was identified as a common problem.

5 DISCUSSION OF THE SCOPING STUDY FINDINGS

5.1 Purpose and Objectives

135 The ToR suggest that:

- The **goal** of the Research into Use programme is to contribute to sustained poverty reduction in countries of Africa and Southeast Asia, where water and sanitation is important to the livelihoods of the poor;
- The **purpose** of the programme is to maximise the impact of the previous Engineering Knowledge and Research, and, by so doing, significantly increase the understanding of how the promotion and widespread use of such research can contribute to poverty reduction.

It has been commented above that this original goal and purpose covering water, sanitation and hygiene are very broad and that within the budget constraints will need to be focused down on a few much smaller topics.

136 Issues that this report seeks to clarify include:

- Why does DFID want EngKaR RIU? Is it to: -
 - Get the dividend on EngKaR sunk costs?
 - Demonstrate visible results in priority/MDG areas (success stories)?
 - Support moves towards a harmonised approach to research?
 - Inform DFID policy, in particular the role of 'water and sanitation' in DFID wider agenda?
- What are the key characteristics of an RIU programme?
 - Need to demonstrate link to poverty impact?
 - Geographical dimensions; the priority countries and or regions?
 - Links into other DFID supported initiatives?
- How will the RIU programme be carried out?
 - Learn lessons from previous RIU supported initiatives?
 - What will be the governance structure (advisory committee, managing agent etc.)?
 - Managed from the UK; or southern based?
- Who is going to run the programme?
 - DFID Research Department?
 - Contract out to a managing agent?
 - Associate with an existing body (regional/national?)

137 This Section sets out the Scope of the programme, pulls together lessons from the literature review and previous experience to provide recommended answers to the above questions; thereby allowing a conceptual framework to be proposed and recommendations to be given.

5.2 Scope of the Programme

138 The programme has the potential to involve a wide range of themes and organisations, each of which may require different approaches and separate activities. The ToR specifically require the programme to select a number of DFID research outputs and/or experience and then to *“work on their promotion and widespread use in Africa and South and South East Asia”*.

5.2.1 Themes

139 We have characterised the themes to be consistent with the “Splash” categorisation, which relate to the previous EngKaR ‘themes’ as shown in Table 5. We have set out an approach for prioritisation of the Themes based on four aspects:

- DFID’s policy requirements
- Quality of previous EngKaR Research
- Feedback from the consultation
- Gaps and DFID’s comparative advantage

140 Our recommended prioritisation is indicated in Table 5 with further justification set out below. In addition, we include a section on potential sub-themes, or clusters, which are described in Section 5.3.

Table 5: Categorisation and Prioritisation of Potential Themes

Categorisation	Former EngKaR Equivl’nt.	Level of Prioritisation				Ranking
		<i>Policy</i>	<i>Quality/Depth</i>	<i>Feedback</i>	<i>Comprtve. Advantage</i>	
Water Resources Management	W1	M	H	M	M	4
Water for Nature	W3	H	M	M	M	3
Water for People	W4	H	H	H	H	1
Water for Industry	W4	L	L	L	L	5
Water for Food	W5	H	H	M	H	2

Note: Levels: H= High; M= Medium; L= Low

141 DFID is already contributing to CGIAR and the NR RIU programme; hence, the need to invest through this programme into water for food is perhaps lower than indicated in the table above. Similarly, DFID has separate programmes investing in climate change issues.

5.2.2 Stakeholders

142 DFID and its research partners have established significant appropriate potential channels of communication and knowledge management partnerships through engagement in the EngKaR programme, its supported resource centres and its support to multilateral organisations. Thus, although DFID is the initiating stakeholder, there are many other key stakeholders in the Water & Sanitation RIU programme, including:

- DFID & other North Policy Makers
- Donor Partners
- North Research Institutions and Centres of Knowledge
- South Policy Makers
- South Research Institutions & Centres of Knowledge
- South Practitioners (project implementation agents)
 - Government Ministries & Agencies
 - NGOs
 - Private
 - Other End Users of Knowledge
- End Users of Water & Sanitation Services (civil society)
- International research and networking organisations (GWP, IPTRID, WSP WSSCC and through the CGIAR)

143 Each stakeholder has different needs, capacities and abilities when engaging in an RIU programme; for example: gender, social standing, level of education, economic status, governance, regional cooperation and infrastructure status.

5.2.3 Existing Knowledge & Documentation

144 In the development arena, most of the documents found have focused on the interface between research and policy making, with a lesser quantity looking at the adoption of new ideas by end users. There is a need for there to be an information culture (at least to some extent) in the selected countries for RIU, without which it is highly unlikely that RIU will succeed. Short term gains may be achieved through North led initiatives but sustained RIU will not happen until the South countries have their own in-country organisations who understand the research process.

145 The existing knowledge management systems, programmes and documents are nearly all aimed at development professionals and institutions. Charging for documentation is a common practice which rather defeats the object of making knowledge easily available to South based development organisations that are unlikely to have access to budgets for the purchase of books and papers, particularly when payment is required in foreign currency; for example, ICID publishes many research papers, which are only available through subscription to its publication at Wiley InterScience.

146 Knowledge is often buried in large volumes or academic tomes, making it difficult to find and access, particularly for people for whom English is not their mother tongue. Hence, finding appropriate knowledge can be difficult and time consuming. The objective of any RIU programme must be turning good appropriate knowledge into “common knowledge” amongst the various development stakeholders.

147 Essential components of the RIU Programme will include:

- Identification of appropriate knowledge with good potential including clustering of knowledge (DFID + non DFID);
- Identification of national and/or regional partners;
- Identification of ALL stakeholders and their need for knowledge/information and support;
- Designing sustainable up-take mechanisms;
- DFID is actively funding water and/or sanitation in the region/country.

5.2.4 RIU Project Location

148 Geographically it is appropriate for DFID to focus on PSA countries in Africa, South Asia and South East Asia. It is recommended that the RIU takes a regional approach, with priorities based on an assessment of the countries within these regions, which have the following characteristics:

- There is a national demand and need for research outputs to contribute to a country’s efforts to reduce poverty;
- There is potential of research outputs to reduce vulnerability to environmental risk (water for people and water for nature) and/or contribute to increased food security;
- There is potential to build, or strengthen, partnerships with regional and national organisations who work on getting research into use;

149 The desirability of learning lessons on the promotion and adoption in a range of environments. Target countries should include those from the better performers and more fragile states.

5.2.5 Timescale and Budget for RIU

150 Most respondents to the questionnaire said they considered RIU to be a “long-term activity”, requiring at least 5 to 10 years. It was also mentioned that the period between

research, particularly blue sky's research, and its adoption and use could often be measured in 10's of years.

- 151 The issue of timescale and sustainability is considered a key issue. It is apparent that within the presently envisaged timescale of 5 years that there is a limitation as to how the RIU programme can contribute to the short term objective of achieving the MDGs. As an example, a programme initiative that aims to influence the rate of sanitation up-take through getting pro sanitation policies adopted by national governments will take several years to see any measurable impact – probably beyond 2015; similarly, developing national capability through supporting south research institutions and/or providing scholarships for promising students (see IFS approach) will take many years to influence sustainability. Similarly, the promotion of an Innovation Systems approach in isolation will have little impact on the achievement of the MDGs within the timescale of delivery in just 6 years time (i.e. by 2015).
- 152 DFID's original indicative budget for RIU was £5 million over five years. However, the potential for a Water and Sanitation RIU is large, given the broad scope of the possible programme, the number of countries, the number of research themes and outputs and the number of organisations to be targeted. There is a clear danger that the RIU be spread too thinly for there to be any detectable benefit. It is recommended that scope and technical focus, the geographical focus and the number of research outputs be prioritised and limited.
- 153 As an indication, if 33% of the budget is reserved for lessons learned and dissemination about the RIU process, and say 5% for programme management, a total budget of £5 million would only allow for £670k per annum for RIU across however many countries are selected.

5.3 Key Messages from the Literature Review and Consultation

- 154 Further to our recommendations given in Section 5.2, and Table 5, the consultation process has indicated several areas of interest that may be appropriate to put together as sub-themes or clusters. However, it should be borne in mind that this has been based on a relatively short-term and northern-based consultative process, which will have been largely influenced by the interests of the individual parties/organisations concerned. It is recommended that a more comprehensive prioritisation process is carried out before firming up on a focused RIU programme. The following have been proposed:
- Urban sanitation because it must serve a growing population;
 - Water for food because it extracts the largest volume of water by an order of magnitude;
 - Re-use of water;
 - Strengthening south academic/research establishments to promote institutional memory which is then available to influence future politicians and policy, future curricula at universities and colleges thus passing on research knowledge to future professionals and technicians;
 - Governance was mentioned in a wide range of contexts.
- 155 Factors that are considered important for the formulation of the programme that came out of the literature review and consultation process are listed below. Whilst this list may appear rather long, it demonstrates that RIU is a many faceted activity, which requires the involvement of numerous stakeholders and skills. The factors include:
- Focus on the achievement of the hardest to reach MDGs, in particular MDG 7;
 - Priority must be driven by demand and clear pathways to poverty reduction;
 - Select DFID EngKaR outputs which have the greatest potential to increase growth;
 - Focus on a limited number of countries;

- Intended beneficiaries are stakeholders in the delivery of water, sanitation & hygiene services and poor people with problematic or no access to these services;
- Measures which impact on gender and social exclusion must be main-streamed;
- Identify and implement up-take activities for research into policy and practice;
- Develop local research capacity;
- Support knowledge exchange between developing country partners;
- Support existing partnership arrangements;
- Support country governments;
- Support donor partners;
- Support civil society;
- Support research and development stakeholders;
- Work through UK, International and National organisations;
- Monitor programme performance;
- Measure the impact of the RIU programme;
- Disseminate lessons learned on RIU for impact on poverty through regional and national organisations.

5.4 Lessons from other RIU Programmes

156 There are four possible approaches to RIU:

- Ensure new projects are better at getting their own research into use (although not relevant here this is recognised as an important part of DFID's new Research Strategy and of DFID's approach to research generally, with communications being a priority in RPCs);
- Move a stock of existing research into use. This needs funding and targets at sufficient scale. It may well mean looking to develop deliverable outputs from the previous, relatively small scale research projects (which were typically at a scale of some £250k) and probably needs to combine the people & networks who did the research plus some additional skills: innovation, communications, etc;
- Knowledge brokering – an intelligent interface between the stock of knowledge (someone who knows the body of work intimately) and the problems confronting the sector. This has aspects of a helpdesk, and might have prospects of linking to a Research Council;
- Improving the system and enabling environment for generically getting sectoral knowledge into use – systems strengthening, innovation systems, etc.

157 Requiring individual research projects to better improve the use of their outputs, is an area which DFID Research has been addressing for some time. Key elements are ensuring researchers and research managers build in strong communications from the outset, and that from the design stage, users of the research are closely involved.

158 If dealing with a stock of knowledge, one needs to sort and filter the full list of projects, to select those that deserve to be up-scaled, either as individual projects or in a cluster. A filtration process can be an expert review/consultation, including previous project managers (recognising the potential for a conflict of interest). It may involve production of a database with summaries of all EngKaR projects; during this process one needs to be clear about what the database is to be used for and by whom. In the case of the NR RIU database, this serves a different purpose – to give the public access to the full set (or a sub-set) of funded projects, though it was found to have a low degree of usability.

159 A key lesson from the NR RIU relates to a problem between the two objectives: getting existing knowledge and research into use in order to address the MDGs, and supporting and developing national organisations as sustainable centres for research into the future. **The time scales of these two objectives are not compatible.** It is important to take note of this in the proposed Water & Sanitation RIU programme. The initial ToR also included similar short and long time-scale objectives which do not support each other. As observed previously, the funding for this programme is relatively small and DFID should consider how it wishes to divide the effort between these two elements of a programme that will have different time-scales.

160 Other lessons to be learned from the NR RIU include potential issues on:

- Reluctance by researchers to cooperate due to concern that other people will pick up on 'their research area', plus other related Intellectual Property issues;
- Contracting; concerns around issuing to an extant research team to scale up/out their research, without going to tender;
- Concentrate on a few countries (NR RIU started off having to be in 15 PSA countries in Africa & Asia, but reduced this to eight);
- Important to link in with a good implementing partner (in the case of NR RIU, this has been through NEPAD's CAADP, which has proven to be a very useful policy linkage, similar SROs have not been so apparent, in the NR case, in South Asia);
- Governance has been an issue for the NR RIU which has had a PAB; similarly the RNRRS programmes had a PAC. The emphasis was on "Advisory" with resulting lack of authority. Care is needed to establish an appropriate governance structure.

161 Examining the 'stock of knowledge' and 'knowledge systems' further, we see that:

- i) Where a stock of research outputs are to hand, but have been under-utilised and need to be put into use – as in the cases of the DFID RNRRS and EngKaR research programmes – a supply-push approach can be adopted. There are two approaches that have been used here:
 - a. RIU can be an investment in known successes, so that they are essentially scaling-up exercises, but scaling up at least a magnitude of order greater than that at which they have been succeeding previously. This 'best bet' approach was behind the original NR RIU design. It has yet to be tested, and thus likelihood of success is not yet clear.
 - b. RIU can offer a menu, or smorgasbord or research outputs for users to select from as appropriate. NR RIU has used this approach with its database of 'verified' research outputs, and the dissemination of them. Evidence is that this has not been successful, not least as it has proven difficult to both present enough detail that those new to the research understand it and also to make the database sufficiently accessible. The NR RIU database has suffered here from having a somewhat clunky user interface.
- ii) Where promotion of a defined stock of knowledge is a lower priority, a systemic approach offers a way to broadly improve the uptake of research outputs. Strengthening the RIU system (or innovation system) can also lead to the uptake of pre-existing knowledge, but it requires demand for these, rather than supply pushing them. This is a longer-term, but probably more sustainable approach. NR RIU is making an intensive test of this approach. Results are not yet available, but initial signs are reasonably encouraging, though are not guaranteed to deliver the dividend on previous specific research.
- iii) A third approach is knowledge brokering: developing an intelligent intermediary function that can help identify demand and match it to pre-existing answers. In the NR RIU situation, the Component 1.2 TTM has to some extent served this function. The knowledge broker knows the database intimately, and can match-

make needs for research outputs with completed research. The approach is not being tested per se in NR RIU. This function could be developed further, and become a more explicit and pro-active service. It could be run from regional or agro-ecozonal hubs in partner organisations. This is not however proposing an IT-based 'expert systems' approach. There is the need for real people who can understanding the problem situations and intelligently match them to research knowledge and researchers.

5.5 Possible Modalities of the RIU Programme

5.5.1 Ownership and Governance

162 A common theme coming out of the consultation process was that there needs to be greater coordination between DFID Policy & Research and the Country Office Programmes. In the context of RIU this supports the requirement that any RIU project must be demand led from within the country.

163 For any research to find its way into business-as-usual in a country it must have local ownership and sponsorship.

164 Consideration could be given to separating the management into regional teams in order to ensure a local focus and to differentiate between cultural differences, Africa, Asia etc. However, the limited budget for the RIU programme may mitigate against this.

165 The question was raised during the consultation process: "How much can Asia learn from Africa and vice versa?" Even within Africa the differences between countries may mean there is little cross cutting experience and knowledge which will work without significant modification or adaptation.

166 Competitive tendering by itself may not get the best management team – there needs to be a significant level of partnering both between national organisations and between south and north institutions. DFID should seek to build on the experience of the successful linkage in the NR RIU with NEPAD's CAADP. In the NR case, it has been suggested that the RIU should link more closely to, or even be owned by the sub-regional research organisations (such as ASARECA, CORAF, etc).

167 The ToR envisage that a "programme advisory board" is established by the contracted party. This however can be rather incestuous, and it may be better for the overview to be provided by a board appointed independent from the contracted party, perhaps with non-executive directors. The board would have a number of functions:

- The general management of the RIU to ensure it is meeting DFID's requirements;
- To ensure RIU activities are genuinely led by national demand;
- To provide technical guidance and to ensure the RIU is being appropriately applied;
- To ensure that the lessons learned are reaching the correct audiences.

168 These functions can be divided into two:

- Policy Board, which would include members from DFID staff as well as from south regional policy. Appointments to the board should be the responsibility of DFID who can then take advice from both the contracted party and others;
- Technical Advisory Team; to be appointed by the management contracting party, with the approval of DFID. It would also be appropriate for DFID to provide at least one team member directly.

5.5.2 Harmonisation

169 DFID is committed to meeting the goals of the Paris Declaration of 2005 on improving Aid Effectiveness, including the need for greater harmonisation of donor initiatives. DFID has already taken the initiative in linking with other European member states in establishing 'SPLASH'. In this RIU initiative DFID has indicated that it may wish to

allocate some of the RIU funding through multilateral agencies, such as SPLASH, the International Foundation for Science (IFS) based in Stockholm, and others.

170 *“SPLASH aims to improve the effectiveness of European funded research on water for development and to develop the capacity of local organizations to coordinate and communicate their research activities. The project focus is Africa and the Mekong region.”*

171 The overall aim of SPLASH is to *“improve water research for poverty reduction and thus contribute to achieving the Millennium Development Goals (MDGs). In order to achieve this, SPLASH focuses on the following objectives:*

- *To coordinate existing national and regional research programmes to minimise duplication and identify gaps;*
- *To design collaborative research programmes which address identified needs;*
- *To speed up knowledge sharing between researchers and practitioners;*
- *To map good research management to maximise use of resources;*
- *To support the transfer of research into practice.”*

172 In the context of RIU the last of the SPLASH objectives is clearly relevant and there may well be scope for DFID to initiate joint funded projects with its European partners.

173 IFS on the other hand, states in its mission statement that it *“shall contribute towards strengthening the capacity of developing countries to conduct relevant and high quality research on the sustainable management of biological resources. This will involve the study of physical, chemical, and biological processes, as well as relevant social and economic aspects, important in the conservation, production, and renewable utilisation of the natural resources base.”*

174 In its strategy IFS says that it aims to *“identify, through a careful selection process, promising young scientists from developing countries with potential to become future lead scientists and science leaders. They will receive support in their early careers to pursue high quality research in developing countries on problems relevant to the mission, which will help them to become established and recognised nationally and internationally. Additional supporting services will be provided to researchers in scientifically weaker institutions and countries.” ... “IFS shall act in collaboration with Affiliated Organisations and other national, regional, and international institutions utilising the complementary strengths of such partnerships.”*

5.5.3 Capacity Building and Help Desk

175 Although capacity building is not anticipated, or recommended, as being the responsibility or a key outcome of this RIU programme, strengthening the capability to do and use research is an objective of the wider DFID Research Strategy (2008-2013). It is recommended to link into other capacity building initiatives and to look for longer term partnership with key knowledge broking organisations in the Region where the RIU programme is to be carried out.

176 DFID has a significant background in supporting knowledge centres in the Water and Sanitation sectors: prior to 1990 long-term support was given to certain research-based organisations (CEH Wallingford, BGS, HR Wallingford and WEDC), then to Oasis and WELL, and now to DEW-Point¹⁷. One significant role of these Resource Centres is to provide a ‘helpdesk’ facility. DEW-Point currently ‘generates and disseminates knowledge on behalf of DFID and their development partners in environment, water resources, water and sanitation and climate change’.

¹⁷ At present DFID has DEWPoint as a Resource Centre covering the environment, water resources, water and sanitation and climate change; TI-UP as a Resource Centre for knowledge in the combined fields of Technology, Infrastructure and Urban Planning, as well as other framework agreements, such as ‘Engage’ which is established to provide support on implementation

5.6 Options decided for Stage 2 of this Scoping Study

177 The following points were included for discussion with DFID as part of the first draft of this report:

- a) Does DFID insist on including 30 EngKaR projects in the proposed five-year programme with the £5 million budget? *We recommend not* (see Section 5.8)
- b) Given the programme budget, should the programme focus exclusively on sanitation and hygiene (including water for people), leaving the water for food, industry and power, and nature to be dealt with by separate programmes; for example, should water for food fall under the agriculture theme and water for nature under the climate change theme?
- c) Confirm the list of potential Countries in which the RIU programme will work: should the list of EngKaR knowledge determine the countries, or, should the countries determine the knowledge to be used?
- d) Can/should knowledge or outputs from DFID funded work other than EngKaR projects be included? *We recommend not in the first phase.*
- e) Can, and if so, to what extent should, the programme work towards promoting into use knowledge derived from other research or work, not funded by DFID? *We recommend not in the initial batch of topics, but this could be undertaken, at a later stage where there is a clear added value by incorporating results from elsewhere to enhance/clarify the outputs of an EngKaR project.*
- f) Should the programme seek to find, formulate and propagate ideas and approaches designed to make future research more likely to be used, or should it only promote use of the results of past research? *We understand that this is already being approached through 'Splash' and should continue.*

178 The following recommendations were made by DFID after their consideration of the two Draft Scoping Study report:

- a) The RIU Programme should be included as part of the Sanitation Research Programme and not be a separate programme.
- b) The total budget of the combined programme will be £10 million.
- c) The RIU projects selected should focus mainly on sanitation but include water related aspects of sanitation and health. It is recognised that whilst the "access to basic sanitation" MDG is the prime objective for the RIU programme, it is also necessary to re-doubled efforts on the "access to safe water" MDG to ensure that progress does not slip behind.
- d) RIU projects should start with EngKaR knowledge but may be clustered with other DFID and non DFID knowledge to ensure maximum impact and take-up towards the MDGs.
- e) The number of items of EngKaR knowledge, the number of projects, the number of countries in which the RIU projects will be implemented will be determined as part of the inception phase of the combined programme. However, the number of RIU projects is likely to include less than the 30 outputs and 10-15 countries envisaged in the RIU ToR for this scoping study; similarly, the budget for RIU may be reduced, depending on the findings of the inception stage of the programme.
- f) The potential list of countries for RIU will come from Sub-Saharan Africa, South Asia and South East Asia.
- g) Knowledge and countries selected for RIU will be determined taking into account the demand from the countries and where there is high potential for influencing the water and sanitation MDGs.
- h) Monitoring, evaluation and disseminating the lessons learned are considered to be important issues to be addressed by this and any other DFID research programme.

- i) The combined research programme should determine the priority areas for sanitation research and RIU during its inception phase and only then consider how, if at all, they fit with any multi-lateral programmes. If at that stage there are synergies and/or benefits to be gained from joining with others, the joint funding of RIU activities may be considered. The source of such funds will only be determined at that time; i.e., there is no commitment at this time to use the funds of the combined sanitation research and RIU programme for any multi-lateral projects.

5.7 Conclusions and Recommendations

179 Section 5 sets out our specific recommendations on the RIU programme.

180 RIU is a long term exercise and by definition will need to involve numerous stakeholder groups. In addition, if the target is to impact at scale on the MDGs, the programme will have to reach out to a large number of end users in several countries.

181 If the budget really is a constraint, it is recommended that the programme focuses on just one area of knowledge: sanitation including the associated aspects of water supply and hygiene. This will have the advantage of:

- Reducing the number of technical fields and hence, “experts” and institutions needed to implement the programme;
- Reducing the number of stakeholder groups involved;
- Allowing direct comparison between projects and approaches in different countries and regions;
- Concentrating the investment on the hardest to achieve MDG and hence, improving the chance of achieving the desired outcomes.

182 It is recommended that a combination of initiatives is supported; thus, although it is recommended to focus on identifying and supporting the uptake of particular (to be prioritised) outputs of previously supported EngKaR projects, it is also recommended to provide some support/funding to the ‘harmonisation’ agenda (in particular through SPLASH) and to establish a close and well supported link with a Help Desk facility (probably financially supported, separately through the Resource Centre agreement, and other communications-supported initiatives).

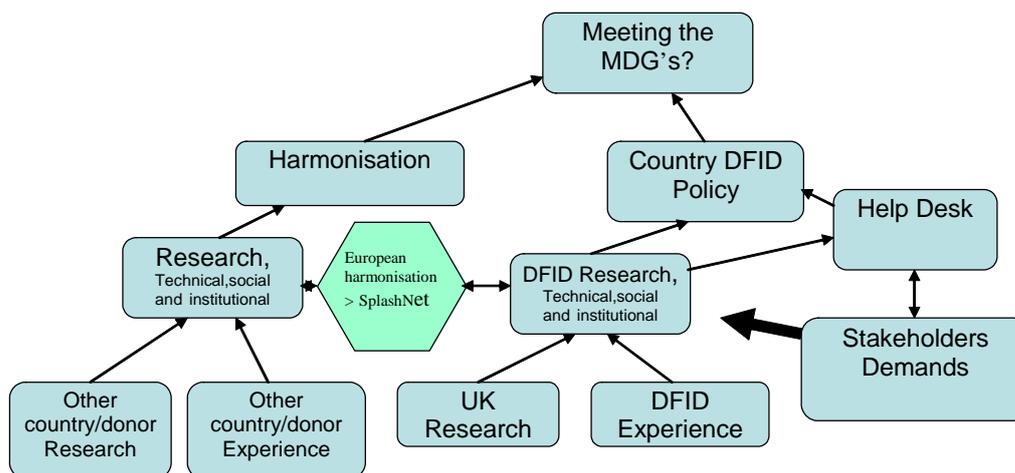


Figure 3: Potential Linkages between the RIU and other DFID Initiatives

183 Each RIU project should involve one EngKaR item of knowledge plus any supporting knowledge to make it viable and sustainable. Given that RIU is a long term activity, it is assumed that each RIU project in this programme will run for the full five years and, for the sake of argument, will require a minimum budget of £50,000 per annum.

SCOPING STUDY RECOMMENDATIONS

5.8 Scope and Content of the RIU Programme

184 We recommend that:

- a) Given the anticipated scale of budget¹⁸ for the Water and Sanitation RIU Programme, this should initially choose up to ten EngKaR projects (or project outputs/clusters of outputs) and perhaps two other DFID-funded pieces of work, whose results are considered especially suitable for cost-effective RIU. Criteria for the selection should include:
 - Relevance to the hard-to-reach MDGs, in particular, sanitation;
 - Likelihood of near-term impact (NR RIU looked for near-to-market technologies);
 - Clear and distinctive outputs or other research results likely to meet keen and demonstrable demand from a significant number of end-users;
 - Availability of effective and willing partners in target countries and regions;
 - Availability of plausible ideas about methods and media for each topic, even if their details are not yet worked out;
 - Likelihood of cost-effectiveness, judged by transparent, if subjective, means.
- b) A significant proportion of the topics should concern sanitation and hygiene, but the spread of topics may include aspects of water related to sanitation.
- c) The RIU projects should be in no more than 10 countries selected so that experience in RIU techniques can be gained in several contexts.
- d) During the inception stage of the programme, when EngKaR knowledge is being selected for RIU, serious consideration must be given to clustering knowledge (including non DFID knowledge) into individual projects, where there is a clear inter-dependence/mutual support between the items; i.e., where one item of knowledge has limited scope for success on its own without the support of the other items.
- e) In the second or third phases of the programme (phasing is discussed below), further topics can be considered for addition to the programme, but there should be no firm commitment to cover the outputs of 30 EngKaR projects (as mentioned in the ToR for the scoping study).

5.9 Timing and Implementation of the RIU Programme

185 In view of the discussion above, and the proposed budget, we recommend that:

- a) DFID should decide now that the five-year budget currently under consideration is only the first part of the process and should be designed to lead into a successor undertaking, to avoid loss of continuity and momentum that would seriously undermine its cost-effectiveness.
- b) The initial five-year RIU Programme should have three phases, lasting about 6, 12 to 18 and 36 to 42 months respectively, with flexibility for some activities to overlap more than one phase.
- c) The first phase, of about six months duration, should be devoted mainly to defining the precise content of the RIU Programme, including:
 - The firm identification of particular research results or outputs to be promoted;
 - Countries or regions where the work will be focussed;
 - The contractors, partners and collaborators who will undertake the work.

¹⁸ The consultants understand that the budget available is likely to be in the region of £5million over a 5 year period.

This phase should end with an inception report, thorough discussions with main stakeholders, and firm decisions about the rest of the programme.

- d) The second phase should concentrate mainly on working up the research results or other knowledge into a suitable state for dissemination and promotion into use. This phase should including any clustering and inclusion of non-EngKaR knowledge, gender and social exclusion issues, and should determine in detail of the means and media to be used. It should end with a report by the programme managers, followed by discussions with relevant stakeholders and decisions about Phase 3.
- e) In the third phase the output and uptake would proceed, with most of the topics in full swing within a few months because of the thorough preparation in Phase 2. If resources permit, some further research topics or fields of knowledge could be added to the programme, with thorough preparation like that of the first batch in Phase 2. At the same time consideration should be given to further topics that could be added, further countries where RIU work would be fruitful, and preparations for the follow-on programme so that it could follow immediately without a funding gap and loss of staff or momentum.
- f) The RIU Programme should be managed by a group of people, whether from a firm, a research institution or an NGO, or from a consortium containing some or all of these. There should be one full-time programme manager and a panel of 5 to 10 other qualified persons with part-time involvement. This executive team should be supported and supervised by a supervisory panel of about five persons, including one or two from DFID and at least three based in developing countries, receiving periodic reports and meeting about twice a year.
- g) The skill sets required to manage a successful RIU programme are different from those required to conduct and/or to manage research. The requirements include expertise in communication, innovation, and areas such as gender, social enterprise and entrepreneurship.
- h) This programme management team should be empowered to subcontract clearly defined units of RIU work to individuals or teams in any country, with a minimum of bureaucratic and contractual constraints beyond a general requirement for transparency.

186 Hence, the RIU programme components now proposed are as shown in Table 6.

Table 6: RIU Programme Components

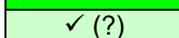
RIU Activity	This Programme	SPLASH	IFS	Other DFID Programmes
Push EngKaR knowledge				
• Water for People – water supply	✓ (?)	✓ (?)		
• Water for People – Sanitation	✓			
• Water for Food		✓ (?)		✓
• Water for Industry		✓ (?)		✓
• Water for Nature		✓ (?)		✓
• Water Resource Management		✓ (?)		✓
Provide Help Desk	✓ (?)			✓
Support National & Regional Institutions	✓ (?)	✓ (?)	✓	✓
National & Regional Training		✓ (?)	✓	✓

Key

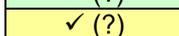
Definite Funding



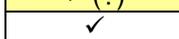
Likely Funding



Possible Funding



Not funded from this programme



ANNEX A: TERMS OF REFERENCE

DFID Central Research Department (DFID-CRD)

Terms of reference for Programme Using Research outputs to help achieve the MDGs in Water & Sanitation: **Water Research into Use**

BACKGROUND

1. DFID's new Research Strategy commits its Central Research Department (CRD) to undertake research that will contribute the achievement of the hardest to reach Millennium Development Goal's (MDGs). MDG 7 (Environmental Sustainability) targets include halving the proportion of people living without water and sanitation. Since the goals were agreed in 2000 there has been almost no progress toward the sanitation target and only limited progress on the water target. Despite significant investment by DFID and other donors in water and sanitation research, much of the knowledge and information produced is unused. To contribute to correcting this DFID wishes to develop a 'research-into-use' programme that will operate in support of country governments, donor partners, civil society and research and development stakeholders to help achieve the MDGs in Water and Sanitation, for the support of economic growth.

OBJECTIVE

2. The objectives of this assignment are to identify programme content and implementation modalities and production of project documents of a CRD/DFID programme for enabling research outputs to be used. The subject area will be water, sanitation and hygiene research for developing countries. The programme will enable the promotion and adoption of outputs from DFID's EngKaR programme and wider DFID experience where there are specific issues of policy relevance

SCOPE

3. This work will be carried out in two parts:

- a) Scoping: The confirmation of the merit of the concept, identification of the programme content and a recommended modality, identification of possible partners and production of a draft Project Concept Note (PCN):
- b) Programme Design: Following approval of the PCN, the production of all programme documentation, in accordance with the Blue Book, to enable DFID to approve the programme and commission the work.

METHODOLOGY AND RESOURCES

4. The consultants shall:

- Explore existing research-into-use programmes for lessons learnt, and relevant research produced to date, to validate concept;
- Specifically explore the gender, social inclusion and poverty reduction aspects of existing research-into-use programmes highlighting best practice examples as well as lessons on what not to do.
- Discuss the proposed programme with DFID staff, W&S research institutions and other development research funding agencies;

- Investigate possible different programme modality options;
- Investigate demand, replication with other programmes, relevance, rationale and likely outcome;
- Complete a programme design report that sets out the options for DFID support;
- Support for a discussion round to reach agreement on the options presented and preferred/selected;
- Develop the programme documentation for both the approval and implementation processes;
- Support to finalise the funding agreement process;
- Final report describing the activities undertaken in the process and any lessons learned that would be of value to DFID.

5. The consultant team should consist of a person or persons expert in the field of water, sanitation and hygiene research, research use (in both policy and practitioner contexts) and familiar with DFID programming and approval processes.

OUTPUTS

6. The expected outputs are:

Stage 1

A report setting out the programme options and recommendations including delivery mechanisms (to include the SPLASH EUWI ERANET option) and a draft A 4 page concept note, to DFID Blue Book guidelines outlining the relevance and potential of the proposed programme.

Stage 2

Project documents to enable the DFID approval of the programme as per DFID's corporate requirements, including the proposed governance and implementation details.

TIMETABLE

7. The expected time line for completing this work is:

Stage 1(scoping and draft PCN)	15 th February 2009
Stage 2 (Drafting final programme document)	15 th April 2009

PROGRAMME DETAILS

The Envisaged Programme

8. The programme will identify about 30 research outputs from DFID's previous EngKaR programme, and wider DFID experience where there are specific issues of policy relevance, based on their potential to contribute to sustained growth and poverty reduction. It will work on their promotion and widespread use in Africa and South and South East Asia. Evidence of the impact of the project activities will be collected, and lessons learnt and disseminated on how best to take forward water, sanitation and hygiene research to maximise its impact on poverty reduction.

9. The programme meets DFID's overall objective for research 'to promote the production and uptake of technologies that will contribute to poverty reduction and the achievement of the MDGs'.

10 The programme will be managed by an institution contracted by DFID through competitive tender and will work with UK, international and national organisations in target countries (to be defined?). Programme performance will be monitored with milestones clearly set up at inception. The risk associated with this proposal is considered to be low, as the relatively high risk process of generating new knowledge has already been achieved.

11. Further details of the conclusions of existing consultation are at Annex. A.

Principles of the programme

12. Preliminary agreement has been reached on a number of areas that should guide the development of the programme:

- The programme will focus on the **use** of existing and new knowledge to achieve the MDGs in water, sanitation and hygiene, and identify and implement uptake activities (action research and pilots) to put research into policy and practice focusing on outputs and outcomes.
- The programme will support existing initiatives and programmes with evidence – based innovation, knowledge and policy outputs. (initial discussion has been held with IFS in Stockholm as a potential partner)
- Activities which are driven by demand and clear pathways to impact will be given priority for support.
- Local research capacity development will be an important element including support to ensure that global knowledge is available at the local level, customised to local circumstances and local involvement and champions.
- Knowledge exchange will also be supported, especially between developing country partners.
- The programme will support existing partnership arrangements in the countries where it works to ensure that the programme is harmonised with other's activities.
- Dissemination activities – particularly the synthesis and sharing of success stories will be included.
- Strong emphasis on the poorly performing sanitation and hygiene sector

REPORTING

13. The consultants will report to the lead adviser (TBA) and Robert MacIver (Project Officer) and will deliver the outputs to the timetable set out in paragraph 8 above.

ANNEX A

INITIAL DFID IDEAS ON POSSIBLE W&S RIU PROGRAMME

Programme Description

1. The **goal** of the Research into Use programme is to contribute to sustained poverty reduction in countries of Africa and Southeast Asia, where water and sanitation is important to the livelihoods of the poor.

2. To achieve this, the **purpose** of the programme is to *maximise the growth impact of the previous Engineering Knowledge and Research*, and, by so doing, *significantly increase the understanding of how the promotion and widespread use of such research can contribute to poverty reduction and economic growth*.

3. The EngKaR was operating for ten years, and covered eight thematic areas. Results included a wide range of research outputs on technologies; processes and policies. Some 30 of these outputs with the greatest potential to increase growth will be selected for promotion and adoption.

4. While the users of the research outputs will vary, the intended beneficiaries of the poverty reduction impacts of this programme include:

- a) All stakeholders involved with the delivery of water, sanitation and hygiene services;
- b) Poor people with problematic or no access to clean water, sanitation and hygiene.

Gender dimensions must be taken into account in both 4a and 4b.

5. The Programme will target countries where the adoption of the research outputs has the most potential to reduce poverty and vulnerability. It will work with existing policy and reform processes in relation to poverty reduction and water and sanitation to ensure the programme supports national initiatives.

6. Partnerships will be forged with relevant public, private and civil society organisations at local, national and regional levels, so that the promotion and adoption of research outputs takes place through, and builds capacity of, existing structures and institutions.

7. The implementation strategy of the programme will be designed to produce lessons on how best to maximise the impact of W&S research on poverty, and to identify the constraints to the adoption of new policies, governance techniques and technologies. This knowledge generation will flow from and form part of the monitoring of the adoption of research outputs and their impact on Water, sanitation and hygiene delivery and on peoples' livelihoods. Lessons from this will be disseminated to organisations involved in Water, sanitation and hygiene research and development in DFID's PSA countries.

What will the programme do?

8. DFID will contract an organisation to manage the programme. The contracted party will undertake the following tasks over a five year period:

- Establish a programme advisory board to provide oversight. Membership will include DFID, research and development institutions, and partner organisations from target countries.
- Identify around 30 research outputs from the EngKaR with the best potential for contributing to increase in growth.
- Identify priority regions and target countries in Africa and Mekong where there is greatest potential for the impact of research outputs on growth increase.
- In target regions and countries, undertake country analyses of existing plans and processes of poverty reduction and agricultural change; and identify entry points and potential regional, national and local partners to implement the programme;
- Ensure that a gender mainstreaming strategy is incorporated into the programme.
- Contract organisations to: implement the promotion and adoption of outputs; assess the impacts of adoption; and, learn lessons on best ways to do this;
- In partnership with regional and national implementing organisations identify key policy, institutional and technology lessons on maximising the impacts of getting research into widespread use, and disseminate these lessons across Africa and Mekong.
- Formulate a communications strategy based on DFID guidelines.

9. We expect that two thirds of the budget will be spent on the promotion and adoption of research outputs, and one third on impact assessment, lesson learning and dissemination.

10. We expect that implementation will be through existing organisations in implementation and/or research. These may be long-term programmes.

Selection of research outputs

11. The contracted organisation will select about 30 research outputs from the EngKaR for promotion and widespread adoption. This selection will be based on the following processes:

- Review of existing EngKaR reports and synthesis studies commissioned by DFID on thematic issues.
- Development of criteria and analytical framework for assessment of the potential impact of research outputs on poverty reduction (social, economic and environment dimensions).
- Classification of EngKaR research outputs using this analytical framework.
- Analysis of how clustering of outputs from different projects and wider DFID experience where there are specific issues of policy relevance into packages suitable for targeted users might lead to greater impacts.

The precise number of outputs eventually selected will depend on the trade offs to be made between the stage of advancement of different outputs, and therefore the amount of effort required to promote them, and the number and size of clusters. The final selection of outputs and clusters will be agreed with DFID.

Identification of target countries

12. The programme focuses on PSA countries in Africa and Mekong. Within these the contracted organisation is expected to identify 10 to 15 countries where the programme will direct the majority of its efforts on the promotion and adoption of research outputs. In the sharing of lessons the programme will target all PSA countries and disseminate lessons more widely to other regions. It is expected the selection of target countries will be based on the following:

- The national demand and need for research outputs to contribute to a country's efforts to reduce poverty and contribute to sustained growth.
- The potential of research outputs to reduce vulnerability to environmental risk (including climate change) and contribute to increased coverage of water and sanitation
- The potential to build, or strengthen, partnerships with regional and national organisations who work on getting research into use.
- The desirability of learning lessons on the promotion and adoption in a range of environments. Target countries will include those from the better performers and more fragile states, and will also be chosen to ensure a wide range of water and sanitation organisations are represented.

Promotion and adoption of research outputs

13. Based on the selection of outputs and target countries the contracting organisation is expected to develop partnerships with UK, international, and national organisations to deliver country programmes on the promotion and adoption of the research outputs. These are expected to include:

- Country level analyses and consultations on national development processes and how the programme can support sustainable infrastructure development and its contribution to poverty reduction and social inclusion.
- Development of national plan and activities for the promotion and adoption of research outputs. It is likely that the contractor will wish to seek support from the original UK research organisations to assist in the validation and adaptation, and clustering of research outputs to meet specific country's needs and environment.
- Assessment of baselines on which to evaluate the impacts of the adoption of research outputs. Disaggregated data (sex, ethnicity, age etc) must be used where appropriate.
- Monitoring the adoption and use of different outputs and evaluating the effects of adoption on water and sanitation coverage and the livelihoods of the intended beneficiaries under different conditions.
- Comparison of impacts achieved across countries and regions to draw lessons on the effectiveness of the different approaches to the promotion and adoption of research outputs.

Lesson Learning

14. A major output of the programme is on building the capacity of national organisations to get research into use to make significant impacts on poverty reduction. This will be undertaken by the contracted organisation working with existing national organisations: to strengthen their ability to get research into use and adding EngKaR outputs to their repertoire of knowledge, tools, and technologies; to assess the impact of different approaches to get research into use; and, based on this experience identifying policy, institutional and methodological lessons that were successful. To share these lessons more broadly the contracted organisation will be expected to design and implement a communication and knowledge sharing component that includes:

- Analysis and documentation of lessons on how to get research into use.
- Identifying target groups (practitioners, research and extension organisations, national policy makers, regional institutions and development partners), located across different regions and countries. This will in due course feed lessons into the proposed DFID regional water and sanitation research programmes in Africa and elsewhere.
- Identification of different pathways for the sharing of lessons.
- Sub-contracting of regional and national organisations to deliver knowledge sharing programmes.

15. Identification of successful projects in EngKaR and their successful outputs and impacts. These stories should be disseminated and published.

ANNEX B: LIST OF PERSONS CONTACTED/CONSULTED

DFID Staff

Name	Organisation
Robert MacIver	Deputy Programme Manager, DFID
George McLaughlin	Research Manager, DFID
Guy Howard	Lead Advisor on this Scoping study, DFID
Peter O'Neill	Deputy Head, DFID
Mary Thompson	Social Development Advisor, DFID
Alan Tollervy	Research Manager, DFID
Jo Mulligan	Health Adviser, DFID
Lesley Hammil	NRR RIU Project, DFID
Peregrine Swann	Senior Water Adviser, DFID
Sanjay Wijesekera	W&S Team Leader, DFID
Ian Curtis	Head of Profession Environment, DFID
Jane Jamieson	Private Sector Infrastructure Policy Manager Global Funds & DFI Department, DFID
Brian Baxendale	Senior Infrastructure Adviser, African Regional Department, DFID
Simon Kenny	Growth & Vulnerability Team Leader, Ethiopia, DFID
Tim Sumner	Environment Adviser, African Regional Department, DFID
Stephen Young	Senior Programme Manager/Senior Infrastructure & Urban Development Adviser, DFID India
Ashufta Alam	Senior Infrastructure and Urban Development Adviser, DFID India
Mark Harvey	Senior Infrastructure Adviser, DFID Afghanistan
Clare Shakya	Senior Regional Water & Environment Adviser, South Asia Division, DFID
Jane Crowder	Infrastructure Adviser, DFID Overseas Territories Department DFID
Andrew Maclean	Infrastructure and Growth Adviser, DFID Mozambique
Rodney Dyer	Pro-poor growth Team Leader, DFID Rwanda
Beth Scott	Sanitation and Health Advisor

External Institutions

Name	Organisation
Barbara Evans	Independent Sanitation Expert
Keith Whetherhead	Cranfield University
Richard Carter	Cranfield University
Richard Francis	Cranfield University
Tom Franks	Dept of Development & Economic Studies, Bradford University
Peter de Vries	DGIS, The Hague
Edward Kairu	Exec Dir ANEW (African CSO on W&S)
Martin Walshe	Global Water Partnership, Stockholm
Robert Chambers	IDS, Sussex University
Anuradha Joshi	IDS, Sussex University
Petra Bongartz	IDS, Sussex University
Barbara Evans	Independent consultant
Darren Saywell	International Water Association, The Hague
Sandy Cairncross	LSHTM, London
Steve Sugden	LSHTM, London
Alan Nicol	ODI/RiPPLE
Tim Forster/ Andy Bastable	OXFAM
Kerstin Danert	SKAT, Switzerland
Anne Blenkinsopp	SPLASH net
Frank Greaves	Tear Fund
Mari Williams	Tear Fund

Name	Organisation
Clarissa Brocklehurst	UNICEF, New York
Jane Bevan	UNICEF W Africa
Oliver Cumming	Water Aid
Abel Mejia	Water Anchor, World Bank, Washington
Andrew Cotton	WEDC, Loughborough University
Jamie Bartram	WHO, Geneva
Pete Kolsky	World Bank, Washington
Isabell Blackett	WSP-EAP
Andreas Knapp	WSP, Ethiopia
Mike Saeger	WSP, Vietnam
Guy Hutton	WSP, EAP
Eddy Perez	WSP, Washington
Peter Morgan	Zimbabwe
Tim Hayward	WSUP
Peter Harvey	UNICEF, Zambia
Martin Burton	Independent consultant
Wouter Arriens	Asian Development Bank
Felicity Chancellor	Independent consultant
Melvyn Kay	Independent consultant / ICID
Chris Perry	Independent consultant / ICID
Carlos Garces	IPTRID
	IWMI Colombo
Marna de Lange	IWMI Pretoria
Pay Drechsel	IWMI Ghana
Jan van Wonderen	Mott MacDonald
Simon Howarth	Mott MacDonald
Dr Guy Poulter/Andy Frost/	NRI
Christine Wheeler	
Bruce Langford	University of East Anglia / ICID
John Borazzo	USAID, Washington
Merri Weinger	USAID, Washington
Neil Runnals/Mike	Wallingford CEH
Acreman	
David Macdonald/Alan	Wallingford BGS
MacDonald	
Geoff Pearce/Nigel	Wallingford HR
Walmsley/Steven Wade	
Jae So	WSP, Washington
Peter Morgan	Zimbabwe

ANNEX C: CONSULTATION QUESTIONS

If returning this questionnaire by e-mail, please give it a new filename (preferably including your name) to avoid confusion with other copies.

DFID is aiming to set up a “research into use” (RIU) programme with the objective of enabling research outputs in the water and sanitation fields to be fruitfully used. In this context “water” includes irrigation (“water for food”), as well as urban and rural water supply (“water for people” and “water for industry”), hydropower, environmental uses, and flood control. “Sanitation” includes hygiene.

SECTION 1: ABOUT YOU							
Institution/Organisation			Contact-details <i>(It is useful but not essential for you to provide full contact details)</i>				
Name							
Please check the box for your selection from the options given, or type in your answer							
Mark your working area of interest : (mark one or up to four of the following categories)							
Policy support	<input type="checkbox"/>	Rural Sanitation	<input type="checkbox"/>	Legislation	<input type="checkbox"/>	Water quality	<input type="checkbox"/>
Research	<input type="checkbox"/>	Urban Sanitation	<input type="checkbox"/>	Governance	<input type="checkbox"/>	Rural Water Supply	<input type="checkbox"/>
Agriculture	<input type="checkbox"/>	Solid Waste	<input type="checkbox"/>	Land management/use	<input type="checkbox"/>	Urban Water Supply	<input type="checkbox"/>
Irrigation	<input type="checkbox"/>	Hygiene	<input type="checkbox"/>	Financing	<input type="checkbox"/>	Water Storage	<input type="checkbox"/>
Land drainage	<input type="checkbox"/>	Urban Drainage	<input type="checkbox"/>	Privatisation	<input type="checkbox"/>	River basins/watersheds	<input type="checkbox"/>
Service delivery	<input type="checkbox"/>	Health	<input type="checkbox"/>			Groundwater	<input type="checkbox"/>
Relief and Rehabilitation	<input type="checkbox"/>	Water management	<input type="checkbox"/>			Wetlands	<input type="checkbox"/>
Poverty alleviation	<input type="checkbox"/>	Industrial Waste Disposal	<input type="checkbox"/>			Coastal	<input type="checkbox"/>
Any comments on your position or experience, in relation to research in these fields:							

SECTION 2: YOUR VIEWS ON THE PROPOSED WATER & SANITATION RESEARCH-INTO-USE PROGRAMME

Q7: What should be the priority themes and topics for Water & Sanitation Research-into-Use Programme, and why? *If more than one theme and/or topic is selected please indicate your proposed weighting and/or priority.*

Main Theme	Specific topics and reasons why
Water for People <input type="checkbox"/> (Including: domestic water supply, sanitation, hygiene etc.)	
Water for Food <input type="checkbox"/> (Including: irrigation, aquaculture etc.)	
Water for Industry/energy <input type="checkbox"/> (Including: industrial production, hydropower etc.)	
Water for nature <input type="checkbox"/> (Including: protecting ecosystems, ensuring ecosystems services etc.)	
Cross-cutting water issues <input type="checkbox"/> (Including: trans-boundary, coastal zone management, etc.)	

Q8: Please provide examples with details if known (topic, country, process, references, etc.) where the outputs of water and sanitation research have influenced outcomes, both successfully and unsuccessfully; for example: adoption of policies, planning, implementation, adoption in the field, unintended effects, etc.?

Q9: Research-into-Use Methodologies: Please provide specific examples of successful RIU of water and sanitation research and knowledge. What have been the key aspects and/or constraints influencing success or failure?

Q10: How should different stakeholders (for example, researchers, funders, policy makers and end-users) be involved in the implementation of the Research-into-Use programme?

*****Many thanks for taking the time to complete this proforma*****

*****Please note that analysis from the information provided in this proforma will be available in the public domain; although no attribution to individuals or organisations will be given*****

*****Although this proforma was prepared with DFID funding, the British Government bears no responsibility for, nor is in any way committed to, the views or opinions expressed herein*****

*****Please return the completed proforma to the Scoping Team: by e-mail to:**

*****Completed proforma should be received by 30th January 2009 *****

ANNEX D: REFERENCES

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