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Research: issues for debate

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Research: Issues for debate

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THE PURPOSE OF this paper is to share some of the findings of an evaluation of a knowledge and research programme in water supply and sanitation of the British Department for International Development (DFID). The intention is to provoke debate on the issues raised.

For more than a decade, DFID (formerly the Overseas Development Administration (ODA)) has been providing funding to UK-based organisations to research solutions to a range of development problems associated with the provision of rural and urban engineering services and infrastructure. The White Paper on International Development, *Eliminating World Poverty: A Challenge for the 21st Century* (1997) emphasised the importance of both water supply and sanitation and the need for research in overcoming poverty.

DFID's Knowledge and Research (KaR) Programme is organised into various research themes, including the W4: Water Supply and Sanitation. The goal of W4 is to "raise the well-being of rural and urban poor through cost-effective improved water supply and sanitation".

Research organisations, in collaboration with organisations in developing countries, compete in an annual cycle for project grants. The findings of a number of these projects have been presented at WEDC Conferences over the years. Further details of projects can be found on the DFID KaR Water website: www.hrwallingford.co.uk/projects/dfid-kar-water.html.

In 1998 and 1999, DFID commissioned an evaluation of the W4 research theme, which was conducted by the author. The evaluation was divided into two parts, an internal study of DFID's documents and projects, and a limited study of the external context, including a survey of research needs and research conducted by other organisations internationally. The internal part studied six projects by six research organisations in depth. Preliminary findings of the evaluation were presented and discussed at a workshop of UK research organisations in September 1999. This paper discusses some of the issues that are relevant to an external audience.

Range of topics

Over the past few years, the range of research topics acceptable to DFID has moved from the technically focused to the application of technology, and from hardware to the software of social and institutional issues. The 1998/99 output objectives for Theme W4 were:

- improved planning of water supply and sanitation projects for health and well-being;
- proven drinking water supply technologies for rural and urban poor;
- proven sanitation technologies for rural and urban poor;
- effective industrial water supply and wastewater disposal for small and micro enterprises;
- effective institutional support for water supply and sanitation for rural and urban poor.

Acceptable projects should be oriented towards:

- effective customer use of engineered services;
- institutional and financial development linked to technology choice;
- sanitation before water supply;
- optimisation and rehabilitation;
- documenting and disseminating what works;
- research linked to demonstration projects in target areas;
- development of local research capacity.

This framework allows for a wide range of possible subjects. This was reflected in the range of topics in proposals in 1998. These included urban sewerage, improving ways of designing for demand and improving services for vulnerable urban communities, handpumps, rainwater harvesting, hygiene behaviour, cost recovery, water quality, wastewater treatment, and water law/water rights.

Poverty

Poverty has always been a major concern for ODA and DFID funded research. Apart from its content, the title of The White Paper, *Eliminating World Poverty: A Challenge for the 21st Century* (1997) makes this explicit. Projects are now expected to address poverty at one of three levels (DFID, 1998 (1)):

- enabling actions - which support the policies and context for poverty reduction and elimination;
- inclusive - broad based actions which improve conditions and services generally, and also address issues of equity and barriers to participation of poor people;
- focused - actions predominately on the rights, interests and needs of poor people.

The issues

Research needs

There are two problems associated with defining research needs. One is how to know what research is actually needed, particularly from the practitioner's and the potential end user's point of view. The other is how to know what research has already been done or is being done into these needs.

Up to now, research agendas have largely been set by researchers and funders. DFID's research agenda has evolved over time and is based on the experience of the organisation and individuals within it, but there has not been a formal exercise to define these needs based on collective experience.

Two important points came out of the discussions on this issue with research organisations. One is that reliance on local partners, whether government or NGO, for poverty focused research may not be safe. These organisations are not necessarily interested in poverty issues, with many still believing in the "trickle-down" theory.

The other is that organisations and the individuals working in them may not understand what research is about, or that their day to day work has problems that need researchable solutions. A municipal engineer sitting in a remote provincial government office may be content to just get on with things according to the rules.

Knowledge of the research that has actually been done is problematic. A number of sources of information are available, but these are not comprehensive or kept up to date. ODA twice sponsored the publication of *Water Supply & Sanitation: A directory of UK-based research*, but as the name implies, it is UK based and is fixed in time. Various organisations such as IDRC, EHP and IRC have databases of their research accessible through the Internet. However, there are many other organisations doing research, particularly in universities and institutions in the South. The GARNET research network has various theme groups, but these are for discussion rather than holding records of research completed. There is no single source of information available to consult to know whether a subject has already been covered.

Putting these two questions together, "how do we find out what practitioners really want?" and "how do we know what research has already been done?" leads to a third question: What are the gaps in knowledge?

In an attempt to answer these questions, the evaluation carried out a survey of both practitioners and researchers, and put the results on a database. The purpose was to learn what areas other organisations have been and are researching in order to avoid duplication with DFID's programme and to learn what areas others see as priorities. From this it should be possible to identify gaps where research is needed and to see where DFID's research funding can be used most effectively to complement the work of other organisations. A questionnaire was directly sent out to

over 36 organisations, and indirectly through the 7 geographic divisions of DFID. 17 responses were received, which was disappointing, but together with records of DFID's research grants, enough to start a database. The potential of the database as a resource for practitioners and researchers internationally was discussed at the workshop for research organisations. Some support for establishing such a database was expressed, but there were concerns that it may overlap with existing databases, and that it would need careful planning. One of the respondents to the survey stated that "creating suitable database systems that are readily accessible to researchers is a major need".

From an analysis of the database, over 20 of the research needs identified by organisations in southern countries have already been or are currently the subject of research projects supported by DFID. This has implications for dissemination of research but also shows the potential for organisations to access such information through the database.

One of the discussion groups in the workshop considered this issue of how to define research needs. There was general consensus that there is a need for a structured framework for dialogue at different levels and in different places to understand the practitioners' and end users' research needs, instead of the *ad hoc* way of identifying research needs as now. The Evaluation Report proposes that DFID should undertake regional consultation processes every two to three years to engage with practitioners at the various levels and end users to develop an agreement on the needs for research. This could be done through its geographic divisions, or by consultants. The results of the process need to be analysed against a good understanding of present knowledge and completed research internationally, with feedback to those consulted.

Partnerships

DFID requires collaborators and arrangements for collaboration to be specified in proposals. Valid concerns of research organisations are that identification of overseas partners takes time and effort which is unfunded, and that it is difficult for potential collaborators to sign up for something which is not certain and which may take more than a year to materialise. Arranging collaborators and then being unsuccessful in the application has some effect on arranging future collaboration, even if the collaborators are informed of the competitive nature of the process. From the evidence of applications, there is a strong element of tokenism, with many letters of support from collaborators saying no more than that they are interested in the project.

In one of the projects studied in depth, no formal collaborators were identified in the original proposal. During the course of the project, collaborative arrangements were established with several organisations based on common interest, motivation and incentives in the form of the research contributing to the organisations own work. This resulted in good working relationships and successful

output from the project. Not having named collaborators at proposal stage allows flexibility to select those with a real interest in the idea of the research project. This takes time to establish and negotiate, certainly more than the brief exchange of correspondence typical of many proposals.

There is a significant difference between ‘partnership’ and ‘collaboration’. Partnership is a long-term relationship built on mutual trust and respect, usually as a result of working together over a period of some years. In contrast, collaboration implies a contractual relationship for the immediate piece of work. Although DFID is emphasising the need to build partnerships, this may not be feasible in the context of the KaR programme. Partnership takes time to develop and evolves out of collaboration. This may not be possible within the two or three years time frame of one project.

From many of the proposals and from the in-depth study of projects, the roles of collaborators are often only as a contact point in a country and for undertaking field work. There are exceptions to this but collaborators are rarely involved in planning and decision-making on the course of the project. Research organisations need to consider the roles and responsibilities for collaborators, and how they can be involved in management of projects.

DFID now emphasises the importance of building local research capacity through the KaR programme. Successful capacity building has been achieved as a result of the TDR and KaR programmes. A notable example is the relationship between Leeds University and the Federal University of Paraiba in Campina Grande in north-east Brazil, with its pond research station, EXTRABES. However, this success was the result of a series of research projects. The present short-term contract system is not conducive to establishing the sort of relationship and planning necessary for this sort of capacity building. DFID and the research organisations need to consider ways to reconcile the objective of building local research capacity with the short-term nature of contracts under the KaR programme.

Products, outputs and uptake

The purpose of projects in the KaR programme is obviously to improve living conditions for people through improvements in technology and practice. However, successful uptake has been mixed. Some of the products of projects funded by DFID have resulted in changes, while others are collecting dust on shelves. An “output to purpose gap” was described in an earlier evaluation of Theme W5: Water for Food. Several reasons for this gap were suggested, including incentives, investment, and professional capacity. (DFID, 1998 (2)).

The basic problem is the separation of the research process from the complex combination of factors necessary for success, and from both development practice and the day to day work of staff in government departments, NGOs and other organisations. To overcome this, DFID and the research organisations need to develop a more comprehensive

and integrated approach to ensure that research fits with development.

The factors identified and some initial ideas on how they can be addressed are:

- Identification of research needed, and responding to demand: (discussed in the foregoing).
- identification of all the aspects that relate to the problem: proposals should identify and analyse all the issues that relate to a problem and actions that are necessary to achieve a solution. (This includes technically focused projects, which cannot be treated in isolation of the context to which they are expected to contribute). These should cover actions that are to be addressed by the research, but more importantly, complementary actions that are also needed. These may be beyond the remit of the research organisation to address, but by identifying them, DFID and the research organisations can work together to find other relevant organisations to ensure that they are carried out.
- researching and developing a solution to the problem: this process needs to be conducted with more reference to the potential users and target audience for the product.
- undertaking activities to address the other aspects: these should be undertaken by other appropriate organisations in co-ordination with the research activities.
- disseminating and marketing the solution: marketing may be outside the realm of many research organisations, calling for different skills and experience to the normal engineer and researcher. It may be necessary to bring in an organisation with the appropriate expertise.
- monitoring and evaluating the resulting use of the solution to see if it has really solved the problem: this has been neglected in KaR projects up to now, but it could be made a mandatory part of new projects.

Management of this process will be crucial. Research organisations may not be the most appropriate, because they may not have adequate experience of the development process into which their project should fit.

Dissemination

In response to neglect of dissemination in the past, the current KaR process requires research organisations to plan dissemination activities from the start of the project. Details have to be provided in proposals and dissemination is one of the project selection criteria.

In *Spreading the Word*, Saywell and Cotton (1999) recommend disaggregating the output for various target audiences. The audiences generally considered for KaR outputs are government and municipal engineers, NGO field workers, other academic researchers etc. An important audience that has been neglected in the past is the future generations of engineers who will be having to tackle

the problems in the water and sanitation sector, and particularly in the urban sector, for years to come. DFID and research organisations need to think about how to influence future engineers by working with universities in developing countries - getting changes to teaching curricula, supporting lecturers in new ideas, providing books and reports to libraries.

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