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Accelerating the transfer of water for development research evidence into policy

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A study by the SPLASH European Research Area Network (ERA-Net) on the design, management and communication of water research relating to low-income countries identified gaps between research evidence and policy at each of these stages. This effectively limits the use and impact of research. Improving interaction between researchers and policy makers allows more informed decision making based on research evidence, and greater impact on development. It also facilitates more demand-led research. Based on extensive global consultation with both researchers and policy makers in the water for development sector, recommendations are made for improving the use of research evidence in policy making.

Background

The greatest development impact of research occurs when it informs policy or practice. Successful communication between researchers and the users of research is crucial therefore for the effective use of research in decision-making for policy (Walker et al, 2010). Furthermore, it is known that there is a correlation between effective dissemination of research and the degree to which research is demand-driven (Fisher et al., 2003), as communication channels disseminate the results of existing research and inform about the demand for new research. Despite this, gaps have been identified between research and policy which effectively limit the use of research evidence. The main assumption behind any effort to bridge these gaps is that by improving interaction between research and policy, policy makers are able to take more informed decisions leading to better policy implementation that in turn generates more effective impact on development.

The SPLASH ERA-Net[1]

SPLASH was the name of the European Union Water Initiative European Research Area Network (EUWI Era-Net) funded under the EU Framework Programme 6. Active from 2007 to 2011, it was a consortium of 16 ministries, funding agencies and national research and technological development authorities from 11 European countries. The three objectives of SPLASH were firstly, to improve coordination of EU Member States' existing water research activity; secondly, to disseminate good research management practice; thirdly, to improve knowledge sharing between researchers and practitioners to speed up the transfer of research findings into policy and practice; and finally, to develop jointly funded research programmes in priority areas.

SPLASH carried out extensive consultation with both researchers and policy makers in the water for development sector in order to satisfy its third objective. This study focused on the degree of disconnect between the research community and those with policy and decision making roles, as well as the impact of this on aspects of research design, management and communication, and policies and decisions made. The specific objectives of this strand of work were to investigate:

- how programmes can be designed and implemented to enable improved uptake of research;
- how to make research more responsive to national and regional requirements; and
- how to improve links with regional and other networks for collaborative research programmes.

Methodology

A number of activities were carried out in support of the above objectives, namely a literature review (Alker, 2008), an e-conference conducted in both French and English (Fisher, 2008a), and a workshop and key informant interviews (Fisher, 2008b).

The e-conference

The aim of the e-conference was to explore the links between research evidence and the development of water sector policy. The four week long e-conference set out the broad objectives of finding out about where research has been successfully (and less successfully) incorporated into sector policy and of investigating any mechanisms that assist the incorporation of lessons learned. 160 people from 24 countries subscribed to the discussion. The e-conference was organized around two main themes:

1. Where are we now and where do we want to get to? (linking research and policy development).
2. How do we get there? (how can we achieve effective linking of research and policy development).

While there were some examples of successful application of research findings into policy development and of links between the identification, planning and implementation of research for policy development, there was still a sense that much more needed to be known about how this might work and what is required to do this effectively. Furthermore, a number of barriers, requirements and existing and potential tools relating to the uptake of research evidence in policy development were suggested by contributors. These raised certain questions about the *incentives* needed to bring stakeholders together e.g. sufficient investment, the lack of a 'collaboration culture', the slow lead times for change; the *prerequisites* of this interface, e.g. increasing the impact of existing structures, improving communication and dissemination of information, identifying the right people, using participatory approaches and ICTs; and the potential *benefits* of such a process e.g. in terms of learning lessons, and monitoring and evaluating the impact of research findings on policy development?

Interviews and workshop

Attendance at a number of sector-related events provided potential opportunities to access appropriate informants for interview. The conferences were the German-African GLOWA Projects International Conference, Burkina Faso; the Healthy and Safe Water for the World International Conference, Uganda; the International Conference on Research for Development, Switzerland; Stockholm World Water Week; and the IWA Congress, Vienna. A workshop was also held at the 6th Annual Mekong Flood Forum held in Cambodia. Pre-arranged interviews with delegates, and interviews arranged during the conferences resulted in 22 key-informants. Seven were involved in policy making (including national ministry level staff, local government and NGO personnel from Ghana, Burkina Faso, Kenya, South Africa, Cambodia, Uganda and Lao PDR) and 15 were researchers (i.e. lecturers, researchers and PhD scholars from universities in Thailand, Nepal, Switzerland, Germany, Cameroon, Ethiopia and Kenya).

Results and discussion

The recommendations presented here mainly relate to actions by research funders as they potentially have the greatest role in responding to these issues and are presented according to the main phases of the research cycle. This cycle varies slightly between disciplines but generally includes the various stages of identifying a problem, planning, gathering, sorting and sifting information, synthesizing and evaluating/analyzing results and reporting.

The inception phase of the research cycle

Priority setting

The first recommendation is about ensuring that strategic and operational objectives of individual research programmes are clear enough to allow for effective monitoring and evaluation. Planning research on a programme basis helps in this, but it is also partly a question of applying the right tools (e.g. the Logical Framework Approach [LFA]). For interdisciplinary/intercultural research, a crucial process is to define the research problem and agree the strategic and operational objectives as project goals, activities and outcomes from the outset in collaboration with all partners. An example of good practice comes from Denmark where

research proposals to be funded by DANIDA have to follow Aid Management Guidelines based on the LFA approach (DANIDA, 2011).

The second aspect of priority setting relates to actively involving relevant stakeholders in the research process. This means identifying who they are, and how they can be actively involved in the planning, implementation, evaluation and dissemination of research. This requires a stakeholder analysis process based on systematic identification criteria (NETSSAF, 2006).

Logistics and administration

It was clear from respondents that the variety and complexity of application and reporting procedures demanded by different funders creates a high administrative burden on research organizations. A contributory factor is that most donor-funded research activities do not follow harmonized procedures or pooled funding in joint programmes.

Case studies carried out with African participants of EU-funded projects provide insight into the problem of excessive administrative procedures (African Water, 2008), such as their complexity, a lack of clarity about what would be covered by the budget and the slow release of funds hindering project start up.

Financial management

The interviews clearly show that national funding available to southern researchers is insufficient to develop capacity of local researchers and this therefore limits the effectiveness of research as well as its influence on decision-making. Research is often characterized by severe funding shortages, insufficient physical resources, limited scientific tradition and few opportunities for networking and knowledge exchange. Funders can assist by: providing support to young researchers; making the engagement of national research obligatory; and increasing awareness of the impact of demand-led research on economic growth. A good example of local investment in water research is the Water Research Commission[2] in South Africa: a proportion of water consumer fees is used to fund research and knowledge exchange.

Human resource planning

The central finding on human resource planning is the need for effective and equitable involvement of southern research organizations in order to improve the conditions for effective uptake of research results by policy makers. Southern organizations are seldom the lead partners in research programmes and are rarely involved in setting research agendas. This is vital if research is to address local demands and for research uptake into policy and practice. A more equitable balance of power in research consortia fosters ownership of research results and increases researcher motivation.

Demand for southern partners by northern research funders is focused on a small number of internationally known individuals, To expand this pool, funders could require evidence of collaboration between organizations in the North and the South and channel their funds more effectively through southern research institutions. Good practice is demonstrated by pilot projects in Vietnam and Tanzania, where DANIDA funds enable local researchers to formulate programmes with Danish research partners.

A final important element of human resource planning should ensure that capacity development does not lead to trained personnel seeking better jobs (the "brain drain" (Langthaler, 2008). Estimates are that 21% of the population with tertiary level education from Least Developed Countries leave their countries (UNCTAD, 2000). Overseas students visiting the Institute of Research Development (IRD) in France are limited to three months stay to prevent alienation from their home countries. The study concluded that virtual participation has potential to channel untapped intellectual and material input from the African Diaspora. Both the New Partnership for Africa's Development (NEPAD) and the African Union (AU) have formally recognized the African Diaspora as a key player in the development agenda of the continent. Funding agencies could require agreements for capacity development and support to regional centres of excellence and research organizations could limit the duration of overseas' stays and ensure good linkages and communication with the home organization.

The implementation phase of the research cycle
Intellectual leadership

Good research management includes clearly defining roles for all partners, and the inclusion of those who can demonstrate their ability to effectively fulfill these. Building up a transnational research group of this sort takes time and resources to bridge cultural, language and capacity divides. A consultation workshop involving research managers showed that longer-term international groups are more likely to build

capacities, and develop joint research agendas and stakeholder networks than are consortia formed in response to the latest call for proposals. Qualified research managers with experience in interdisciplinary and demand-led research can establish good relations within research consortia, as well as with end users. There are particular management challenges posed by demanding interdisciplinary water research which require individual communication skills and time dedicated to reflect on and agree joint problem definitions, research questions and synthesis of results. However, these integrated approaches are key to solving broad and complex problems resulting in policy relevant insights.

Synchronisation of research and policy cycles
The fact that the time frames of research and policy are not the same hinders the use of research evidence in policy making. The research cycle can be too short to influence policy in the medium and long term, and rapidly developing policy processes cannot always be sufficiently supported by research. Furthermore, policy making processes can be rapid and cannot wait for research to catch up. This can only partly be solved through conducting research into future strategically important fields in preparation for future demands.

Some organizations were identified that fulfill an important intermediary role between different institutions involved in research and policy making, helping to bridge these gaps. They can disseminate aggregated results that are specifically targeted to the potential users and ensure effective dissemination at the right time for uptake. Communication via multi-stakeholder platforms or other intermediary institutions allows agreement to be made on future research priorities, the joint planning of research processes to meet demand, and harmonization of timing of research outputs and the demand for results by decision makers.

The communication and dissemination phase of the research cycle
It has long been recognized that communication of research is a crucial element of research management practice (Menou, 1993; Saywell and Cotton, 1999) although it is still an area of significant weakness.

Duplication of research occurs and existing knowledge is not used to its full potential
Although material related to water supply, sanitation and hygiene is often produced through research or projects it can remain unpublished except as grey literature. Few national documentation centres exist where research findings are made accessible for future use and therefore they are rarely included in scoping studies for new research. Adding to this, publications in scientific journals are often hard to access for many local organizations due to poor library facilities and prohibitive journal subscriptions, and audiences may prefer alternative formats.

Dissemination of research results is inadequate
Strategic communication and dissemination activities are often not sufficiently integrated into research funding schemes, the resulting proposals submitted and the programmes and projects implemented. As a consequence, potentially useful research findings may not be made available and used. Respondents offered suggestions for improvements: targeting products (e.g. fact sheets or policy notes) to the intended end-users; developing and implementing a communication strategy (only 53% of the European programmes evaluated by SPLASH had a communication strategy) (Fassio, 2008); and providing incentives for researchers to actively disseminate their results to potential users. A communication and dissemination strategy that defines the objectives and outcome measures at the programme and individual project level should be embedded in funding schemes. Furthermore, strong personal motivation of researchers to promote their findings is crucial; an important element of this can be engaging with intermediaries to help to transfer messages.

The role of intermediary actors is little known
Intermediary actors (e.g. consultants, the media, multi-stakeholder platforms and practitioner networks) can act as knowledge brokers to improve the uptake of research in policy and practice *(*van Kammen et al., 2006*)*. They need to bridge different time lines between research and research user*s*, form a link between different styles of communication, and mediate between different systems of incentives and accountabilities. How different intermediary actors facilitate knowledge exchange, however, seems to depend very much on the specific institutional set-up and is not fully understood.

The monitoring and evaluation stage of the research cycle

Non-academic outcomes and impacts of research, such as those on policies, different dimensions of using water and sanitation, capacity development or institutional development are difficult to assess and cannot be measured in peer-reviewed academic publications. Knowing more about where and how a research programme caused positive development outcomes or impacts is an important way of learning how to design and implement a research programme for development.

The mapping exercise carried out by SPLASH (Fassio, 2008) showed that moving from monitoring and evaluating the outputs of a project to *outcome and impact* monitoring and evaluation is still a challenge. Most of the 43 water research programmes in low-income countries funded by EU Member State bilateral programmes were subject to external and internal evaluation, while impact assessment through stakeholder evaluation was implemented only in a few of them. Moreover, the procedures differ between programmes within each country and this lack of common guidelines inhibits better cooperation, use of research results and investment.

Conclusions and recommendations

The findings above have provided valuable insight about how to improve the design, management, communication and evaluation of water research in low-income countries. While these conclusions may be expected, they are rarely achieved. The major responsibility lies with the funding agencies to play the greatest role in responding to this and setting high standards for those they fund for research into use. Reasons why these areas are neglected are not completely clear; awareness of the issues may be weak, and implementing these measures require focussed time and effort, on behalf of funders and researchers.

Getting the partnerships right

The importance of ensuring that southern research actors and stakeholders are sufficiently involved in the different stages of a research programme is well demonstrated. This can mean the use of participatory approaches, stakeholder analysis and adequate funding leading to more symmetrical research partnerships, all of which can be fostered by research funders. Funders can also assist in the design of long term research partnership funding i.e. implementation of national funding schemes and co-funding schemes, and the possible provision of a dialogue platform for programme formulation. Research proposals can include a stakeholder analysis as a requirement and the engagement of national (southern) researchers as a condition of acceptance for funding.

Getting the processes right

Good management and implementation of research ensures that research activity matches the known needs of coordinated transnational research and of future policy making. When setting the criteria for funding schemes, time planning, stakeholder involvement, and monitoring and evaluation procedures, funders could accommodate an interdisciplinary, demand-led and user-oriented approach. Research can also be commissioned which anticipates strategically important areas in advance of political decisions. More can be done to build and maintain long-term relationships through multi-stakeholder and dialogue platforms to link research and policy and to strengthen independent policy research institutions in low-income countries.

Getting the product right

It is important to maximise the use of research results, firstly, through the effective dissemination and communication of outputs, and secondly, by subsequently monitoring and evaluating their outcomes and impact. Funding schemes should demand evidence of the systematic communication of research through the planning and implementation of a communication and dissemination strategy (with at least 10% of the total budget allocated to this). Furthermore, reporting systems should include progress on dissemination, based on an effective monitoring and evaluation of how target groups are reached. Outcome planning and monitoring components should also be a funding requirement.

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Notes

[1] http://splash-era.net/index.php [2] http://www.wrc.org.za/ [3] http://www.nepad.org/

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