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# INTEGRATION INSIGHTS

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ILLUSTRATING A SYSTEMATIC APPROACH TO EXPLAIN  
INTEGRATION IN RESEARCH – THE CASE OF THE WORLD  
COMMISSION ON DAMS

Gabriele Bammer

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## ILLUSTRATING A SYSTEMATIC APPROACH TO EXPLAIN INTEGRATION IN RESEARCH – THE CASE OF THE WORLD COMMISSION ON DAMS

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*A framework for explaining integration in a consistent manner is illustrated using the case study of the World Commission on Dams. This example shows how the framework provides a useful way of examining the integration aspects of the Commission's research. It also highlights that many essential elements of integration are not routinely described, making integrative research difficult to learn from and improve. This could be overcome by promotion of the routine application of the framework.*

*Integration Insights is a series of digests of concepts, techniques or real-world examples of integration in research.*

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### A FRAMEWORK FOR DESCRIBING INTEGRATION IN RESEARCH

*Integration Insights #1* presented six questions which provide a framework for describing integration in research. These allow us to be consistent in our descriptions, as well as giving us the ability to collate what we learn from different studies and to compare different approaches to integration. The questions are:

1. What is the integration aiming to achieve and who is intended to benefit?
2. What is being integrated?
3. Who is doing the integration?
4. How is the integration being undertaken?
5. What is the context for the integration?
6. What is the outcome of the integration?

(Bammer and LWA Integration Symposium Participants, 2005).

The application of this framework is demonstrated here using the research undertaken for the World Commission on Dams, which operated between 1998 and 2000. This provides a useful way of focusing in on the integration aspects of the Commission's research. It also highlights gaps in the available information about some key elements of integration in the Commission's investigations. These gaps are typical for descriptions of integration in research and draw attention to the value of a structured approach to describing integration.

The framework questions can be used in any order and in this case it is useful to start with the context for the integration.

### THE CONTEXT FOR THE WORLD COMMISSION ON DAMS RESEARCH

Context involves the political or other action circumstances which led to the research and which may be influential during its life. Integrated research is often undertaken in response to a driver from outside the research community – such as public concern, government policy or business innovation. Understanding the context can therefore be critical for appreciating how the research is shaped and the outcomes assessed.

The World Commission on Dams was established against a background of increasing controversy about large scale dams and a worldwide stalemate in the building of dams where opponents were causing delays and therefore huge cost overruns (World Commission on Dams, 2000). There had been a change in the

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## INTEGRATION AIMS AND BENEFICIARIES

## WHAT THE WORLD COMMISSION ON DAMS RESEARCH INTEGRATED

power balance, with those adversely affected by dams gaining influence through collective action and the transnational anti-dam movement (Khagram, 2004). This was allied to a shift in perceptions about appropriate governance, with increasing demands that governments consult their citizens before acting on their behalf (World Commission on Dams, 2000).

A 1997 workshop hosted by the World Conservation Union and the World Bank brought together 35 representatives of pro- and anti-dam interests, which unanimously recommended the establishment of the Commission (IUCN – World Conservation Union & the World Bank Group, 1997; Scudder, 2001; World Commission on Dams, 2000). The Commission maintained balance between pro- and anti-dam interests among its 12 commissioners and its 68 member stakeholder forum, as well by establishing a broad funding base drawing on 53 public, private and civil society organizations (World Commission on Dams, 2000). It worked within a budget of just under \$US10 million (Scudder, 2001).

In terms of integration in research generally, there are two basic aims. The first is integration to improve understanding, while the second is integration to improve the application or implementation of research knowledge. This can be to improve policy, professional practice, commercial products or some other application.

In terms of integration to improve understanding, the World Commission on Dams aimed to *“Review the development effectiveness of large dams and assess alternatives for water resources and energy development”*.

In terms of research application, the Commission aimed to *“Develop internationally acceptable criteria, guidelines and standards where appropriate, for the planning, design, appraisal, construction, operation, monitoring and decommissioning of dams”* (World Commission on Dams, 2000, p. 65).

The overall aim was to set in train a process to achieve *“development effectiveness”*, where *“decision-making on water and energy management will align itself with the emerging global commitment to sustainable human development and on the equitable distribution of costs and benefits”* (World Commission on Dams, 2000, p. xxxiii).

Humanity was the intended beneficiary through this commitment.

In general terms, for integration to improve understanding, this usually involves synthesizing a number of different disciplinary perspectives, and it can also include perspectives of people who are affected by the problem or issue under consideration, as well as of people who are or could be in a position to exert influence over the problem or issue. At a more specific level, this can involve integrating different research results, epistemologies, cultures, values, power, geographical and temporal scales and so on. A further step can be the integration of the improved understanding into policy, professional or other practice, or various products.

The World Commission on Dams report does not specify the disciplines encompassed, but the work shows that they were numerous and wide-ranging, with engineering, ecology, anthropology, economics and law providing a few examples.

In its research and consultation activities, the Commission worked with those displaced or otherwise affected by dams, as well as with powerful funders and construction industries, specifically *“government agencies, project affected people and non-governmental organisations, people’s movements, the dam construction industry, the export credit agencies and private investors, and the international development community”* (World Commission on Dams, 2000, p. viii).

Integration across different interests was therefore a primary task for the World Commission on Dams. The Commission saw this as achieving balance between demands for irrigation, electricity, flood control and water supply (the benefits of

## WHO UNDERTOOK THE INTEGRATION

dams) and debt burden, displacement, impoverishment of people, and disturbance of ecosystems and fishery resources (the costs of dams).

Other specific integration tasks included synthesis of a range of technical, social, environmental, financial and economic evidence from case studies, country studies, a survey, technical reports, submissions, and fora. Other tasks are not articulated in the Commission report, but would have been numerous, including, for example, synthesis across different values, cultures, and geographic regions.

The Commission saw its research as the first step in a longer-term reconsideration of policy and practice regarding dams, both the building of new dams and the monitoring and decommissioning of existing ones. The Chair described this as follows: *“Through this process a shared understanding and truth began to emerge, and with it the thin thread with which to sew the stitches of reconciliation”* (World Commission on Dams, 2000, p. iii).

Even though integration is central to research partnerships, the process of synthesis need not be collaborative. It can be undertaken by an individual, usually the research leader, or by the whole group or a subgroup. Integration often involves a cascade, with synthesis occurring within subprojects and then across subprojects.

This aspect of integration is often poorly documented and the World Commission on Dams case study is no exception. Khagram, a long-term member of the Secretariat, reported that the integration was undertaken by the Secretariat and ratified by the Commissioners (personal communication, 3 August 2004).

## HOW THE INTEGRATION WAS UNDERTAKEN

Integration methods are currently poorly understood. In terms of integration to improve understanding, approaches can be categorised into dialogue-based, model-based, product-based, vision-based, and common metric based. In terms of integration to improve the application of knowledge, methods include research translation, developing decision support systems, co-production of knowledge, and advocacy.

The World Commission on Dams did not specify the integrative techniques it employed, however, it laid out an integrative framework for decision making about future dams, which is useful to describe in this context. It eschewed a “balance sheet” approach of assessing costs and benefits in favour of multi-criteria analysis. A guiding vision was proposed for the integration, namely a globally accepted framework of norms about human rights, social development and environment, and economic cooperation, based on United Nations declarations and principles. It also proposed favouring negotiation and consensus based on pre-determined priorities and principles.

It is worth noting that the Commission report was a consensus document, supported by all the Commissioners (World Commission on Dams, 2000). This suggests that the Commission used at least some of the integrative methods it proposed for future decision making about dams in its own work.

## OUTCOMES

Evaluating outcomes involves examining what the integration produced, as well as the process of integration. Significant questions include: How well did the integration meet its aims? Was effective integration achieved? Were influential new insights produced? Did effective action result? Were effective integrative methods used? Would other methods have made useful contributions?

The World Commission on Dams case illustrates that evaluation of outcomes can be quite difficult, especially in complex and highly politicised cases. The fact that the Commissioners, representing a range of interests, were able to produce a consensus report is a positive outcome. Other successes were widespread discussion of the report (World Commission on Dams, 2001 and see

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<http://www.dams.org/report/reaction/>) and the rapid establishment of the United Nations Environment Programme Dams and Development project (see [http://hq.unep.org/dams/About\\_DDP/](http://hq.unep.org/dams/About_DDP/)).

As yet there has been no evaluation of the impact of the Commission's work on the building of new dams or on the re-evaluation of existing ones, although there is evidence that governments, funders and builders for at least some new dams are ignoring the Commission findings (Giles, 2006). It is also important to note that it is not clear what a fair expectation of impact is when the goals are political and aim to rectify long-standing inequalities.

The success of the Commission can also be assessed in terms of the research process. There was widespread praise for the Commission's extensive work and for its broadening of considerations deemed to be relevant.

There was also criticism centring on inadequate consideration of the benefits of dams, and on the impracticality of its proposed ways forward (see <http://www.dams.org/report/reaction/>). Again this opens the question of what can fairly be expected, keeping in mind resource limitations.

*Integration Insights #1* pointed out that in traditional disciplines, research is assessed by others from that discipline through peer review. This would also seem to be appropriate for evaluation of integration in research. However it requires the fostering of a new college of peers, who have been involved in similar integrative projects. In order to conduct their assessment these peers will require key elements of integration to be described in ways that are not standard now. This could be achieved by adoption of the framework presented here.

## CONCLUSION

*Integration Insights #2* set out to show that the application of a standard framework to the description of integration in a research project is straightforward. It particularly highlights key aspects of integration which are generally not made explicit in the current ways research is described. It also shows that many of the essential elements of integration are currently not written up in research publications.

This is not meant to be a criticism of the World Commission on Dams. Indeed the Commission's publications provide more documentation and assessment of the integrative processes than many other large integrative projects.

The *Integration Insights* series aims to promote the routine application of the six-question framework described here and in *Integration Insights #1*. It also endeavours to describe concepts and approaches to integration which are applicable in many areas, including natural resource management, public health, security and biotechnology.

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CONTACT	<p>Professor Gabriele Bammer, National Centre for Epidemiology and Population Health, ANU College of Medicine and Health Sciences, The Australian National University, Canberra ACT 0200, Australia.</p> <p>P: 61 2 6125 0716</p> <p>E: <a href="mailto:Gabriele.Bammer@anu.edu.au">Gabriele.Bammer@anu.edu.au</a></p>
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