

Working with the stakeholders – combining participatory methods with hard data to evaluate three environmental programs

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Abstract

In developing new policy directions for protecting the quality of coastal waterways, Environment Australia (EA) wanted to review lessons from three programs (57 projects) and include program stakeholders in the process (primarily the coordinators of funded projects).

The evaluation was conducted in two stages. Firstly a discussion paper was prepared that described the program and included interim evaluation findings. At the second stage, a national forum of key stakeholders provided input after the paper had been circulated. This input helped refine evaluation findings as well contributed to the development of future directions for EA's water quality programs.

Data was collected to develop the discussion paper from a systematic review of project documents. A framework for the analysis was developed that allowed specific characteristics of interest to be classified and the program and its outcomes to be accurately described using projects as the base unit of analysis. Additional data came from a small number of key stakeholder interviews, six case studies and in-depth interviews with a sample of managers.

This methodology was possible because the program managers had included evaluation in their planning and had developed a performance evaluation framework from which reporting formats were developed.

This paper will discuss the strengths and weaknesses of the data collection methods from the viewpoint of the external evaluators, the project stakeholders and the Commonwealth managers. It will also discuss how the methodology has supported stakeholder understanding of, and participation in, decisions about new policy directions.

Key Words

Environment, water quality, review, document analysis, report data, participatory evaluation, program logic

Background – the water quality programs

The quality of Australian coastal waters, particularly rivers, bays and estuaries adjacent to large urban towns and cities has become degraded by common industrial and household practices. Australian governments at all levels have recognized that the degradation of coastal water quality is a major environmental issue and have funded programs to address this problem. This paper discusses the review of a suite of three programs.

From 1997 to 2002 Environment Australia (EA) funded a set of three complementary water quality programs with many common elements contributing \$40 million, which facilitated investments by the local government (mainly coastal councils), state water management and catchments authorities and other agencies, and private sector partners of \$134. The programs were managed directly by the Commonwealth with the assistance of a Technical Assessment Panel, who gave advice on the technical merits of suggested approaches.

The programs shared the same overall vision of improving the quality of Australia's coastal waters by promoting best practice and bringing about changes in the practices and policies of organisations that have a substantial impact on water quality in key coastal towns and cities. As such, innovative and significant infrastructure projects were funded, such as the construction of on-ground works that would reduce amount of pollution entering local or regional waterways from wastewater and storm water. The programs also promoted the reuse of wastewater by funding projects that piloted new commercial uses for re-cycled water, especially in the agricultural sector.

The Commonwealth is not generally responsible for funding water management infrastructure at a local and state level and as such aimed to produce a catalytic effect by contributing to the funding of larger projects that were already on the drawing board, or providing initial seed funding for projects that would not otherwise have commenced at that time or at all. They also hoped to initiate change by funding projects that were either able to demonstrate on-ground best practice or innovation to others in the targeted sectors. This approach was intended to multiply the effects of the original funding, and maximise benefits to the community from the investment made.

The review

The purpose of the review was to learn lessons from the programs that would assist in the development of new policy directions for protecting the quality of coastal waterways.

The review took an approach that combined a document analysis with stakeholder consultation conducted by a university researcher and a participatory process. Unusually, the consultants did not manage all aspects of the review, with Environment Australia managing the consultative process and the liaison with a university researcher and the university, the quality of interview data. The consultants did however have access to the data collected by the other parties (albeit limited in the case of the interview data) and were responsible for synthesizing and making findings.

The review was done in two stages in order to combine the findings from the ARTD document analysis and stakeholder interviews with the participatory process. In the first stage, the interim review findings were summarized as discussion paper, which was circulated to all project proponents prior to a forum. The second, participatory stage, was a forum hosted by EA that brought together all 57 project managers and key academic stakeholders to discuss issues arising from the interim findings and future directions for programs to address coastal water quality issues. ARTD used the input from the forum to finalise the review findings.

Fundamentally, the methodology chosen had to be able to fulfill the review objectives. Given this, the reasons for choosing the methodology were a mixture of pragmatism, opportunism and the program manager's need to consult stakeholders about future water quality policy. From the pragmatic viewpoint, the budget for the review was very small (just 0.09% of the program budget) and reasonable quality project documentation was available. With the project data available and already accounted for in the cost of the programs the collection of primary data by ARTD appeared not to be warranted. Especially, as there were opportunities to compare the emerging findings from the documented data with qualitative primary data collected by the university researcher for her PhD thesis and with self-generated case studies by successful projects. We, the independent consultants, had access to all sources of data, managed the document analysis and guided the development of the case studies.

Using program logic to understand the programs

Our first step was to develop an understanding of the programs and how they were meant to achieve their objectives. ARTD did this using program logic methodology, that is, depicting the internal logic of each program as an outcomes hierarchy. These outcomes hierarchies showed how the programs are able to demonstrate the achievement of intermediate outcomes that are consistent with contributing to the ultimate goal of improved water quality. This approach was useful for a number of reasons:

- helped clarified the program managers' understanding of their programs and the mechanisms and factors that contribute to achieving the program objectives
- there was a significant time lag between activities being implemented and the expected water quality outcomes and many projects were not yet complete. The program logic approach clarified program manager's expectations of the achievements that could be shown at the time of the review

- helped differentiate the demonstration effect outcomes from education outcomes, which were not fully understood by many program stakeholders. Demonstration outcomes are defined as the uptake of best practice to improve water quality by organisations in a targeted sector, as a result of their knowledge of the successful application of these practices. By contrast, education outcomes generally related to changing community or industrial behaviour.
- highlighted the scale of many projects, which means they were just one factor influencing regional water quality, and it was not reasonable to attribute improvements or otherwise to the projects alone.

Document analysis

The interim findings were largely drawn from a systematic analysis of data recorded in the 175 program documents available at September 2001, that is, project applications, progress reports, final reports and selected technical assessment panel reports. Only eight final reports were available at the time of the review.

Using the projects as the unit of analysis, ARTD developed an analytical framework based on the project documentation that allowed specific characteristics of interest to be classified and the programs to be accurately described. This framework was checked by the review steering committee.

Briefly this analysis covered the numbers, status and types of projects, funding, administrative issues, program publicity, and key characteristics such as partnership models, national significance of the project, features of innovation, demonstration activities and outcomes, activities and progress towards stated milestones and in achieving outcomes. As the data was contained in project reports and not in separate databases, we also developed an Access database. The data were used to describe the programs, their progress and achievements in ways not available to either the program managers or proponents before this; indeed the findings produced a few surprises.

A document analysis was feasible because the Commonwealth program managers had taken account of evaluation in their planning and developed a performance evaluation framework from which standard progress reporting formats were developed. Proponents were required to submit six monthly progress reports using a standard format and a final report at the completion of the project. The progress reports had dual purposes, firstly as a management tool to ensure accountability and as such periodic funding was tied to reporting deadlines. The second purpose was to systematically collect project process and outcome data, as it became available. Thus, it was possible for independent reviewers to compare and collate performance data even though the Commonwealth had only limited systems in place to record or manipulate the data once collected. The lack of systems for processing routinely reported performance data is a common phenomenon in large government programs and is a significant barrier to using these data in evaluations as setting up databases and transferring the data after the fact is very time consuming and costly.

Although this method was feasible and a reasonable approach to a program level review, there were limitations, some of which were partially overcome by the complimentary participatory methods used. A major limitation was that the accuracy of the findings was largely reliant on the quality of the information in project documentation, particularly progress and final reports. Although a standard progress reporting format was used by projects, the extent, consistency and quality of information contained in these reports was variable. Variations in skills between project managers and also managers' perceptions of the purpose of the reports can explain this variability. Some project managers indicated that they regarded the reports as a way of accounting for their commitments, not as part of a program evaluation framework. Consequently, minimal information was provided to meet those accountability requirements. In addition, progress reports were less successful at capturing the progress made on complex projects, as the six-month reporting cycle was too short. Some proponents suggested that a case study methodology might better capture complexities of large projects, and that progress be monitored through regular in-depth audit interviews.

The reporting format also had limited functionality in capturing particular kinds of information, for example, a project's impact on organisational culture both internally and externally. As one project manager stated,

“The main limitation of the brief progress reports is the inability to show the wide range of challenges and cultural changes that innovation seeks and can realise.”

Another example of limited functionality is the area of demonstration activities or outcomes, which were poorly reported by many proponents, generally because they did not understand the term or confused demonstration with education.

Another limitation of the document analysis methodology were changes in reporting requirements over time, particularly final reports, which meant that there was some inconsistency between the kinds and the extent of information available across final reports for projects started at different times. A further limitation was that we were not technical experts but evaluation experts. This meant that where outcome data were available, we were unable to give an independent confirmation of the technical success and safety of the approaches used. This flaw could have been overcome by either involving the technical assessment panel at this stage (not a recognized function of the panel) or by bringing in technical experts (not feasible given the review budget). Nevertheless, members of the technical assessment panel were involved in reviewing the interim findings and found no cause for concern.

Stakeholder consultation

Although the document analysis was the main source of findings, these data were supplemented by information from selected participants and other stakeholders at all stages of the review. As such, we were able to check the accuracy of our findings from the document analysis using data collected directly from proponents and from expert observers of the programs.

Perspectives at the program level were obtained through interviews with five key stakeholders who were representatives of national water associations, a leading academic and members of the technical assessment panel. These interviews were face-to-face and done concurrently with the document review. They concentrated on the appropriateness of the program objectives, patterns of funding and broad achievements.

Perspectives at the project level were obtained from interviews of 17 project managers completed for a PhD research project by Angela Hale, University of Adelaide, Mawson Centre for Environmental Studies. This research was approved by EA in the hope that it could provide information for any review of the programs. Angela provided a summary of her discussions, which covered the implementation process and difficulties and successes at the project level. She has continued interviewing project managers and her work will provide further insights into how water quality may be improved by organisations in these sectors. This information proved to be very valuable in that it largely confirmed the findings emerging from the document analysis as well as allowing insights into how projects were being managed by consortia, organisational change outcomes, extent of innovation and expected pollution outcomes. The other advantage was that it came at no cost to either the consultants or the Commonwealth. The disadvantages were mainly around the different timelines of university research and commercial evaluations and importantly, the lack of access to the raw data and constraints around publication. At the time of the review Angela had not finished interviewing and we were fortunate that she was willingly to take time out to summarise her conclusions up to that stage to meet our needs. We had no access to the raw data and were only able to publish the data as a discreet summary because of publication constraints tied up with PhD data.

An additional source of project perspectives was case studies of six projects identified by the EA as demonstrating best practice. These case studies were developed by the projects according to guidelines prepared by ARTD and helped illustrate the main findings of the review.

The participatory process

Project proponents were given the opportunity to participate in the review at the two-day forum, "Water Innovation Now". Environment Australia underwrote the cost of the forum, paying for all airfares and the accommodation costs of all project coordinators.

The interim findings were tested against project proponents' knowledge at the forum. Participants had received a copy of the findings (discussion paper) prior to the forum and also had the opportunity to provide written comments (we received two submissions). ARTD presented the findings at the forum and participated in a lively discussion of their implications. Leading academics, commercial businesses involved in reusing wastewater, leading projects and decision-makers from Environment Australia all gave presentations. Project coordinators attended workshops where they discussed some of the issues arising from the review as well as future directions in water quality improvements.

The inclusion of the forum was the vision of the Environment Australia program manager. He saw it as fulfilling many needs, the first of which was to engage these important stakeholders in the development of future directions for water quality policy by giving them evidence of what had happened and information on current technical developments, in order to do so. The project coordinators and their peers represented the groups that will sustain, disseminate and implement future activities to improve coastal water quality and their perspective, expertise and support was essential to develop viable policies, new programs and strategies. They are also the innovators on the Australian scene and will lead others in changing practices. Conversely, it was useful for decision-makers in government to hear first hand about how the problems of water quality can be addressed.

The second main purpose of the forum was to confirm and discuss the implications of the interim review findings. This objective was achieved in that discussions at the forum clarified issues and provided insights into areas where the data was weak or not available. Project managers were largely comfortable with the broad description of the programs and with the assessments of current progress. However, they felt that they had undersold the extent of monitoring being undertaken and their achievements in their reports. These important insights would have been lost without the confirmation process provided by the forum. They had not been highlighted in the two written submissions received. The discussion of the findings along with other relevant sessions also helped elucidate innovative features of projects and the extent of demonstration, organisational and pollution reduction outcomes not sufficiently captured by the documentation. It gave life to the dry numbers coming out of the document analysis but also showed how difficult it is to capture the degree of effort committed and the complexities of these large and varied programs.

Another explicit purpose was to encourage cross-sharing of technical and practical knowledge, demonstrate best practice and highlight innovation, a purpose that was more than achieved from our observation.

Conclusion

An analysis of documented data can serve as the primary input for an evaluation such as this, provided that the limitations are recognized and other cost effective triangulation methods put in place to confirm the findings. By including a participatory mechanism not only were documented data confirmed and weaknesses identified but this method also provided the Commonwealth with the organisational and practitioner perspective vital to develop effective policies. The combined review methods also supported stakeholder understanding and participation in, decisions about new policy directions.