PCR Data Analysis

Evaluation Unit
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IDRC

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Introduction

Project Completion Reports (PCRs) have been used by the Centre, in one form or another, for the last 15 years. Up until now, however, there was no quick or easy method of pulling together information contained in the reports for aggregate analysis. The possibilities for Centre-wide analysis were limited because formats were unique to each division and, since only "hard copies" of the reports existed, it was a tedious and costly process to tabulate and analyze the data. The PCR's present format overcomes these deficiencies. The entire Centre, from divisions to regional offices, now uses a common format. Responses can be quickly and easily combined in reports for aggregate analysis because each question is electronically entered as a discrete record onto a database. A more focused approach is possible as well. Projects can be analyzed according to responsibility centre, recipient institution, type of project, country, Programme Officer, etc. Whatever form it takes, analysis of the PCR database brings to the Centre a unique capacity to highlight strengths and weaknesses in programming efforts, and thus equipped with "lessons learned", to design and implement more efficient and effective projects. This report presents an analysis of selected questions drawn from the Project Completion Report database.

The dynamic nature of the PCR database should be noted. Since PCRs are continuously being closed, the sample size available for analysis keeps expanding. Evidence of this growth comes with a comparison of the sample sizes used for analysis in Section II and III: the first draws on information from 265 closed PCRs; the latter 276. The number of projects used for analysis is noted at the beginning of each section. As well, because more than one response was often given in the note field attached to each question, the number of responses is often greater than the number of note fields included in the sample. For instance, although only 20 note fields may have been completed for a particular question, there might be 30 unique observations. Therefore, the number of responses analyzed is usually greater than the number of note fields.

Since the PCR database is relatively new Section II of this report briefly examines a cross-section of response categories to get a sense of the type of information available. A more focused analysis of the issues is presented in Section III and Section IV, which explore project management and capacity building outcomes respectively. Section I begins with a summary of the reports findings.
Overview of Findings

Quantity and Quality of PCR Information

One of the primary reasons for conducting this analysis of the PCR database was to test the quantity and quality of information inputted by program staff. Three indicators were examined: the percentage of note fields completed; the percentage of mis-categorized responses in the note fields and the relevancy of the information contained in the note fields.

1) Quantity of information - the percentage of note fields completed: the absence of qualitative data in the note fields can undermine the usefulness of PCRs as a corporate reporting tool: note field data can move analysis beyond a simple accounting of response frequencies and begin to help identify underlying trends. The note fields can also hold important lessons for program staff in terms of project design, informing them for instance, of reasons underlying shifts in methodology mid-way through the project cycle. Of the seven questions analyzed, four had response frequencies below 50% (Figure 1).

![Figure 1: Percentage of Note Fields Completed](image)

Questions 12a and 12b had some of the lowest response rates for all the questions examined. A partial explanation for this may be that PCR authors tended to answer this question only if some aspect of management was perceived as unsatisfactory. This reticence means that for the most part PCRs inform us of management weaknesses; they do not, however, give us insight on what works - i.e. what management practices should be replicated to help guarantee the success of future project implementation. Response frequencies for the capacity building questions were somewhat higher, with the largest response coming, not surprisingly in question 6a (individual and institutional capacity building) one of the main focuses of IDRC's funding support. There was some confusion over what question 6e was actually asking, and this may explain the low response rate.

2) Quality of information: The quality of the information provided in completed note fields was often poor: information was irrelevant, incomplete or the responses were mis-categorized. Information quality varied by question with the greatest problems encountered in questions 16c, 16g and 6e (Figure 2).
For Questions 16c and 16g, a large proportion of respondents mis-categorized their responses (11% and 8% respectively) - i.e. respondents included recommendations and comments in the note fields that were more appropriately assigned to other categories of recommendations. PCRs also identified problems but offered no recommendations to ameliorate problem situations (20% and 18% respectively). Together these two problems suggest that some PCR authors are, as yet, unclear on the type of activities that fall under each recommendation category or their responsibilities in completing this Section - the need to move beyond simply stating positive and negative aspects of project management, information dissemination, etc., to recommending some type of action. The only other response category to be mis-categorized was Question 6e, with 22/276 PCRs reporting on project impact on marginalized groups (e.g. poor farmers) and not marginalized research communities.

The task of analysis was further hampered because many of the responses in the “note field” contained information of little value for analysis. For instance, one of the most common responses in questions 12a and 12b was a note listing the division that administered the project. This information is already imported from Radius and, therefore, provide no additional information. Often only one or two word remarks were included in the note fields “very well managed”, “capacity was strengthened”, etc.; this type of response does very little to illustrate why the rating was given.

Lessons Learned
Although the number of PCRs included in the sample was relatively small some early trends in the data were discernible.

Project Monitoring and Staff Turnover:
Much of the Centre’s weakness in project management (technical and administrative) was attributed to a lack of project monitoring or lapses in project monitoring associated with staff turnover and poor transfer of responsibilities from one responsibility centre to another.
Of the 68 comments\(^1\) recorded, 26 (38\%) suggested that project monitoring was lacking in varying degrees, and only ten applauded the Centre's monitoring efforts. Generally it was felt that close monitoring would enable P.O.s to identify and address problems early in the project cycle.

Many of the PCRs (12) pointed out that the underlying causes of a breakdown or interruption in monitoring could be traced to staff turnover: "projects that experience difficulties require extensive monitoring which is not always possible when P.O.s keep changing". Data from the PCR database suggests that in order to improve project success through better project monitoring, the Centre will have to work towards perfecting the seamless transfer of responsibilities between P.O.s.

**Capacity Building**

PCRs reported that IDRC project support had its greatest capacity building impact on the development of researchers' and institutions' research skills.

Approximately 70\% of PCRs reported "significantly" strengthened research skills among individuals scientists; likewise, institutional research skills were reported as "significantly" enhanced by 60\% of PCRs.

Capacity was influenced or strengthened through on-the-job work experience, networking and training activities:

- One of the most beneficial aspects of project support reported by PCRs was the opportunity it gave researchers to refine knowledge and skills through on-the-job work experience.

- A large number of PCRs spoke of gains to institutional or individual capacity as an outcome of interaction between scientists; conferences, workshops and training sessions proved good occasions for researchers to meet and exchange ideas. Project work was noted as particularly important for young researcher just beginning their careers as it gave them the opportunity to work with more experienced scientists.

- Project support enhanced the profile and credibility of researchers and institutions and thus helped them sustain research funding.

\(^1\) Note: of a possible 276, 93 comments were completed for Question 12a "IDRC Project Management". However, if we drop responses which contained little information for analysis (25) the sample size is 68.
Recipient Management
PCRs generally rated recipient project management as satisfactory but noted two main weaknesses: lax reporting practices and delays in project completion.

➢ 28.5% of PCRs responding in the note fields to Question 12B, “Recipient Management”, reported that technical and financial reports were often delayed by months or even years or were of poor quality.

➢ 120 of the 276 PCRs examined (43.5%) were completed behind schedule; the average length of the delay was 18.1 months.
II. Brief Questions and Answers
Eight questions and brief answers are examined below. The sample includes 265 closed PCRs.

(1) **Question:** How many projects developed or tested a new or innovative methodology?

**Answer:** 34.7% of the PCRs reported testing a new or innovative methodology; 63% did not and 2.2% left the answer blank.

(2) **Question:** How many projects were interdisciplinary? What proportion of interdisciplinary projects were considered to have been conducted in a satisfactory manner?

**Answer:** 51.7% of the projects were reported as interdisciplinary; 45.3% of PCRs did not consider their project interdisciplinary; three percent of the response categories were left blank. If the respondent considered the project to be interdisciplinary they were asked to further rate this aspect of the project as satisfactory or unsatisfactory - i.e. was the interdisciplinary component designed and implemented in a satisfactory manner. Close to 69% of the projects were deemed to have been conducted satisfactorily and 9.5% were considered unsatisfactory; 21.9% of the responses were left blank (Figure 3).

![Figure 3: Proportion of Projects that were Considered Interdisciplinary](image)

3) **Question:** Was there any change in the proportion of projects that were interdisciplinary over time?

**Answer:** All blank responses were excluded (n=257) and projects were divided into three groups by year: 79-83, 84-88, 89-93. A review of the sample of projects indicates that the interdisciplinary nature of projects has fluctuated very little over time (Figure 4).
4) **Question:** How many projects were participatory? What proportion participatory projects were deemed to have been conducted in a satisfactory manner?

**Answer:** 37.7% of the PCRs projects were considered participatory, 57.4% were not and 4.9% of the responses were left blank. Of those projects reported as participatory, 53% were considered to have been conducted in a satisfactory manner, 22% in an unsatisfactory manner; 25% of the responses were left blank (Figure 5).

![Figure 5: Breakdown of Projects with Stakeholder Participation](image)

5) **Question:** Was there any change in the proportion of projects over time that were participatory?

**Answer:** All blank responses were excluded (n=252) and projects were divided into three groups by year: 79-83, 84-88, 89-93. Figure 6 below illustrates the trend over time.
Since the sample size is relatively small (especially in the first and last period) the figures cannot be considered conclusive. Nevertheless, this kind of exercise does provide some early feedback and points to the need for continued monitoring.

6) **Question:** What percentage of the PCRs reported a negative development impact.

**Answer:** 17 of 265, or 6.4%.

7) **Question:** Calculate the number of development impacts reported and the average per project; identify the three most and three least commonly identified by PCRs.

**Answer:** A total of 1141 development impacts were listed for the sample of 265 closed PCRs. The mean number of development impacts identified per project was approximately 4.3. The three most commonly identified development impacts in order of numerical significance were: "Utilization of Results" (166), "National Research System Capacity" (130) and "International Cooperation" (114); the least commonly identified impacts were: "Other" (8), "Governance" (16) and "Canadian Research and Development" (34).

8) **Question:** What proportion of PCRs were not completed on the planned termination date.

**Answer:** Of 276 PCRs examined, 120 (43.5%) were completed behind schedule; the average length of the delay was 18.1 months. This holds implications for the Centre because every time a project exceeds its scheduled limit it carries an opportunity cost - i.e. the time an energy forgone administering an overdue project that could have been used productively to address some other task. It also suggests a need for better initial assessment of project duration.
III. Project Management

This portion of the analysis reviews the Centre's and the recipients' project management efforts. Questions 12a and 12b from Section 6, Project Management, and Question 16g from Section 7, Recommendations were analyzed. Question 12a is divided into two components. The first part asks respondents to rate (as satisfactory or unsatisfactory) IDRC's technical and administrative performance in the realm of project management. In the second part of the question they are requested to justify their rating by explaining in the note fields the factors that contributed to (un)satisfactory project management. The procedure is repeated in Question 12b, but this time in terms of the recipients' management of the project. Question 16g prompts respondents to detail recommendations that may help improve management practices.

II.a IDRC's Project Management

Frequencies

The majority of respondents rated IDRC's project management efforts (both technical and administrative) as satisfactory.

Figure 7: IDRC's Project Management as Rated by PCRs (n=276)

The response rate for question 12a was 95%. Only one in three PCRs (93:276), however, completed the "optional" note field. The lack of qualitative input makes it difficult to offer a comprehensive overview of IDRC's project management. This task is further hampered because many of the responses in the note fields contained information of little value for analysis. (One of the most common responses (offered 21 times) was a note listing the division that administered the project. This information is already imported from Radius and is part of the tombstone data.)
Strengths and Weaknesses

Strengths
Three categories were developed to classify the factors attributed to strong management: project monitoring and assistance, management of training programs and other.

Project monitoring and assistance (13 observations): As staff at the Centre are well aware, effective monitoring and assistance helps to strengthen the recipients' technical and administrative capacity, ensures project continuity, and facilitates the validation of research results. In recognition of this fact, 13 of the PCRs commended P.O.s for their "close involvement" and cooperation with project leaders and staff. The advice, guidance and support provided by the P.O.s were viewed as "instrumental" to the projects' success. One PCR endorsed program staff management efforts because of their sensitive treatment of project leaders and staff living in politically unstable countries.

Management of training programs (2 observations): Two PCRs commended program staff for the careful manner in which award recipients were selected.

Other (7 observation): Four rated the projects as satisfactory and then admitted in the note fields that they did not possess enough information to "truly assess the effectiveness of IDRC's management." Three PCRs suggested that IDRC's role appeared minimal and, therefore, did not offer any comment.

Weaknesses
Although PCRs generally rated IDRC's project management satisfactory, a number of weaknesses were identified. Six categories were developed to classify the factors attributed to poor management: project monitoring, support and continuity; financial management; project design weaknesses; equipment problems; lack of Program Officer expertise; and, other.

Project Monitoring, Support and Continuity (27 observations): As noted earlier, thirteen PCRs endorsed IDRC's monitoring and assistance activities. More than twice as many, however, perceived IDRC's efforts to be weak in this area.

Twelve PCRs suggested staff turnover reduced the effectiveness of IDRC's monitoring and support activities. Staff turnover is a critical problem because it means that projects may go for extended periods of time without adequate supervision (because (1) lag time between project...
Interest in this project disappeared when the original P.O. left.

Staff turnover contributed to project delay; more monitoring was necessary.

With the departure of the original P.O., the administration of the project in the later stages suffered.

Il aurait cependant été souhaitable d'effectuer plus de visites.

Corporate restructuring was cited by four PCRs as contributing to the breakdown in monitoring. One PCR noted that restructuring had led to a "breakdown in communication" and the other suggested that restructuring meant that the project was shuffled from responsibility centre to responsibility centre with a resultant breakdown in monitoring.

The remaining 11 PCRs reported that monitoring or support at one or more stages in the project cycle had been poor but advanced no explanation as to why this was the case.

Financial Management (6 observations): IDRC's financial management was criticized by 6 respondents. Two reported that funding continued even though it was clear that projects were going to fail; two others noted that final payments were made before a final report was received. (In one instance, the final report arrived four years after final payment.) Finally, two PCRs suggested that the slow release of project funds resulted in project delays.

At one point financial and technical reports sent to the regional office were not analyzed and forwarded to the head office for more than four months which caused a problem in releasing money.

Project design weaknesses (4 observations): Poor project design was viewed as symptomatic of poor IDRC management by four respondents.

The original project was over-budgeted, and some aspects of the methodology . . . were not spelled out in sufficient detail.

The Project Officer] did not have a good enough idea of which groups were doing really good work with indigenous minorities in the region.

Equipment problems (3 observations): Project delays caused by the failure to order equipment in a timely fashion or to order the appropriate equipment was noted by three PCRs.
There seems to have been no capacity at the P.O. level, at our end, to deal with the technical issues raised by the transition from the old research team to a new one.

*Other (11 observations)*: A number of disparate explanations were used to justify the poor rankings assigned IDRC's management practices. Poor management was attributed to budget cuts, to personality conflicts, the inflexibility of administrative regulations, problems associated with travel arrangements and the lack of expertise on the part of the responsible P.O.s to see the projects through.

II.b Recipients' Project Management

*Frequencies*

Two hundred and seventy-six PCRs are included in the sample. The majority of respondents rated the recipients' project management efforts as satisfactory.

*Figure 8: Recipients' Project Management as Rated in PCRs (n=276)*

With 126 note fields completed for this question, the response rate (46%)\(^2\) was higher than that registered for IDRC's project management (question 12a). Like the responses for 12a, however, the majority of PCRs referred to shortcomings or weaknesses in recipient management and only a few described management strengths.

*Strengths*

Twenty-two PCRs reported in the note fields that project management was effective. Fourteen indicated that project management was satisfactory but gave no further information. The balance described qualities or practices that they believed contributed to effective management. For

\(^2\) Twenty of the responses could not be considered for analysis because the respondents had simply noted the recipient institution that had received funding and nothing more.
instance, in a number of projects the P.O. was praised for being "committed", "dedicated" or "quick to learn from mistakes." Other beneficial qualities included good communication skills or a capacity to conduct participatory research.

Weaknesses
The majority of observations (102) related to perceived managerial weaknesses and have been grouped into four categories.

Reporting practices (36 observations): PCRs identified poor reporting practices as a fundamental weakness of recipient project management. The submission of financial and technical reports was reported to have been plagued by delays (from a few months to many years) which in turn delayed project implementation; in some cases reports were never received by IDRC staff. In other instances, the data or financial analysis contained in the reports was considered to be of poor quality.

General Management practices (38 observations): A number of poor management practices or qualities were singled out by PCRs. They included: poor communication practices — recipients were chastised for not responding to IDRC correspondence in a timely manner, and for not sharing research results with other network members (11 observations); the dogmatic stance of the research leader in response to advice or recommendations from program staff (9 observations); questionable financial practices (4 observations); and, poor leadership ability (4 observations).

Institutional (20 observations): The departure or re-assignment of key personnel was cited by nine PCRs as contributing to project delay or failure. Another eight reported similar consequences stemming from institutional infighting. The highly bureaucratic nature of some organizations as well as the lack of interest or support from senior management was also used as an indicator of poor management by four PCRs.

...Major reshuffles in project staff caused big delays...

...Internal politics...caused a few delays and mis-management of funds.

The senior manager...appears to have taken little active interest in the project and as a consequence, initial support and supervision of the project were inadequate.
Research design or implementation (12 observations): Twelve of the PCRs indicated that some aspect of design or implementation had been weak. For instance, on one project casual labourers, who seemed to lack the skills necessary for the task, were designated as research assistants and extension workers. On another, poor health worker training coupled with the dearth of medical support undermined project implementation.

II.c Project Management Recommendations
Question 12a and 12b of the PCR questionnaire asks PCR authors to rate and comment on perceived management strengths or weaknesses. As part of Section 7, Recommendations, Question 16g allows PCRs to go one step further and suggest appropriate actions to buttress or discourage these practices.

Frequencies
Two-hundred and fifty-six closed PCRs were examined for responses to question 16g. The note field was completed for sixty-two records, however, because five of these were miscategorised, the total sample population was fifty-seven.

Recommendations Directed at IDRC
Forty-nine recommendations were directed at IDRC. Six categories were developed:

Project monitoring (18 observations): Fifteen PCRs called for closer project monitoring as a means for identifying and addressing problems early in the project cycle. In this manner, it was suggested, problems are dealt with in a timely fashion maintaining project continuity and increasing the potential for success. Another three suggested that close monitoring had played an integral role in project success. PCRs pointed out other benefits derived from the practice of close monitoring:

- Reveals, early in the project cycle, whether objectives are impossible to attain, and thus allows for their reorientation;
- Provides an opportunity to evaluate a project leader's performance and take corrective action if necessary;
- Identifies the need for technical assistance and allows for the hiring of a consultant to ensure that all project objectives are met; and,
- Provides early warning of project failure; thus equipped, the Centre can cancel funding (or a least put it on hold).

One PCR pointed out that the level of project monitoring should depend on the capacity resident in the recipient institution: only projects where the potential for delays and difficulties is great should be considered for such an activity. Although many PCR authors felt that project
monitoring must be improved, only one recommendation was offered to rectify the situation; it was suggested that the Centre demand a more substantive interim progress report from the recipients. This comprehensive report would gauge progress and thus better inform project management.

**Cancel funding to failing projects (4 observations):** Four of the forty-nine respondents recommended that IDRC move quickly when a project is foundering to ameliorate problems or, if this approach fails, then cut its losses by cancelling funding altogether. It was generally felt that the ability, or willingness on the part of P.O.s to disengage will ensure that a greater portion of the Centre's budget goes to successful projects.

**General management recommendations (13 observations):** Thirteen of the respondents offered comments/recommendations concerning general IDRC management practices. They included such recommendations as: (a) limit the number of researchers from the same institution attending international workshops. Less expensive national workshops can be held, if necessary, to disseminate information; (b) provide project management training to research teams to improve capacity on this front; (c) increase final payment to ensure that final report is completed by recipient; (d) and, use of consultants should be encouraged as an effective means of providing technical assistance.

**Management procedures and coordination (4 observations):** A number of recommendations were aimed at IDRC’s management procedures and coordination activities. Two respondents suggested that project management and procedures should be made adaptable and flexible to project-specific problems in local research environments. For projects with more than one recipient and/or donor, a lack of clearly defined management structures creates a situation in which there is "confusion regarding mandates". Responsibilities must, therefore, be clearly delineated from the outset of any project that includes two or more donor and/or recipients. Two of the forty-four respondents suggested that this was a problem that needed to be rectified.

**Other (10 observations):** Ten of the projects allowed for no easy categorization because they contained a statement of a problem with no clear solution (e.g. no final technical report handed in); presented solutions which were so general to render them of little use (e.g. project management "needs to improve"; or offer institution of project specific recommendations that hold no broad lessons for IDRC’s project management.
**Recommendations Directed at the Recipient**

Eleven of the recommendations forwarded by PCR authors related to the recipients' managerial practices. Generally, these recommendations did not share the same thematic consistency as the recommendations directed at IDRC.

*Reduce costs (3 observations):* A number of cost-cutting measures were advanced: (a) use local scientists to gather data when the project leader resides some distance from the study area thus cutting travel costs; (b) reduce project leaders' travel abroad when information can be gathered through correspondence, and; (c) have the research team convene consultative meetings concomitantly with other academic seminars they are attending.

*General comments on management qualities (4 observations):* Four respondents commented on such management abilities and qualities as communication skills, leadership ability, and commitment.

*Maintain project continuity (2 observations):* Two respondents suggested that the recipient should be required to assign an alternate P.L. At the same time, the alternates must be competent and equal to the task.

*Other (2 observations):* Two of the responses provided little or no insight into project management.

**IV. Capacity Building**

This part of the analysis examines responses to Question 6 in the PCR Questionnaire, *Capacity Building*. Question 6 is divided into five parts (a through e). It attempts to measure the overall impact a project has had, or can be reasonably be expected to have, on enhancing the capacity of recipient individuals and institutions in terms of: (a) research skills, (b) research management capacity, (c) capacity to sustain research, (d) ability to link research and application, and (e) research capacity of marginalized groups. PCRs are asked to rate capacity building impact on a scale of zero to three. (A rating of 0 equals "none"; 1 is "limited"; 2, "significant"; 3, "very significant". A rating of nine is accorded projects for which the question is "not applicable.")

This section is broken into two parts. First, responses frequencies for each question are briefly examined. The second half reviews the contents of the note fields and explores the mechanisms through which IDRC projects have expanded or reinforced the knowledge base and skill sets of researchers and institutions. At the same time, any deficiencies in its practices are also probed and detailed. Many of the observations recorded by PCR authors apply equally to researchers and institutions; therefore, unless otherwise stated, capacity building for these two groups will be analyzed together.
Frequencies
A total of 276 PCRs were included in this sample. With the exception of Question 6e, the impact on capacity building was judged to be considerable by the PCR authors. Indeed, for question 6a through 6d, between 62% and 77% of the respondents indicated that the project they reviewed had a "significant" or "very significant" impact (see second half of Table 4 below which provides the average response for questions 6a - 6d). On the other hand, few respondents to the first four parts of Question 6 reported "no impact" whatsoever (between 1.81% and 7.25%).

Question 6e, which asks respondents to record impact on the research capacity of marginalized groups, is notable for the great variation in response patterns compared with the other four parts of Question 6. Generally, PCRs rated success as limited. The upper half of Table 4 compares responses to question 6e with the average response for the previous four questions on capacity building. For instance, approximately, 20% of the respondents to 6e indicated that there was no impact on the research capacity of marginalized groups, whether at the individual or institutional level (ranking of 0). This is four times the average response of 5% given for the previous four questions.

Table 1
Question 6e Responses Compared to Averages for Four Previous Capacity Building Questions

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<td>Institution (Avg 6a-6d)</td>
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<tr>
<td>Individual (Avg 6a-6d)</td>
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<td>Institution (6e)</td>
<td>20.29</td>
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<td>Individual (6e)</td>
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Analysis of Note Fields

Question 6a: This question was formulated to help track the Centres efforts to strengthen research capacity over time. Two hundred note fields were completed by the PCR authors.

Learning by doing (101): The majority of PCRs noted that researchers and institutions involved in IDRC project activities had gained much knowledge and expertise. Projects work was perceived as an important learning process, providing an opportunity to refine knowledge and skills and ultimately enhance the capacity of researchers and institutions to conduct successful research. A subset of this group (26) were more specific and listed the issue area or the types of skills that were developed.
The research team gained valuable experience in designing and testing low-cost water filters - experience that can be drawn on for future research in this field.

La recherche menée a permis de renforcer les capacités de recherche: conceptualisation des phénomènes à étudier, formulation de problématique, analyse de résultats et redaction des rapports de recherche.

The project resulted in the establishment of a pool of indigenous expertise in information technology which may be unique in East Africa. Developers of the Cooperative Database system gained an intimate knowledge of Oracle and developed a large complex information system.

Learning from others (94 observations): A large number of PCRs spoke of gains to institutional or individual capacity as a byproduct of interaction between scientists. This interaction was realized during collaborative research projects, informal training sessions such as workshops, participation in seminars or conferences, visits by external consultants or travel to other institutions to learn new or innovative research methods. One of the more interesting aspects was the number of responses (16) emphasizing the role projects had played in aiding young scientists just beginning their careers. It was reported that their participation in the projects had generally strengthened capacity by giving them an opportunity to work with experienced and capable researchers, as well as a chance to gain theoretical knowledge and hone practical skills.

No capacity gained (36 observations): In cases in which no capacity building was observed, a few common themes prevailed. Capacity building was found to be negligible simply because no training component had been included in the project, or because the project had failed, thereby bringing little benefit to the researchers (14). Often it was noted that many of the researchers or institutions already possessed more than adequate experience (15), and as a result, the project added little capacity. Finally, in reference to institutional capacity building a number of respondents noted that intuitions shed capacity as researchers, for one reason or another, departed for employment elsewhere (7).

Other (17 observations): Seventeen PCRs made no reference in their statements to research capacity and, therefore, could not be categorized.

Question 6b: Research projects sometimes fail, not because of bad science, but because of poor management. Researchers spend years in school acquiring knowledge of methods but rarely leave equipped with such critical management skills as designing projects within budget constraints, organizing equipment, transport and personnel, etc. Because project management is an essential
ingredient to continued project success, Question 6b tries to measure the impact IDRC projects may have in this critical area. Of the 276 projects included in the sample, 130 had a note field completed.

**Learning by doing (43 observations):** Just as in the question of research skills, many PCRs indicated that project work and with it the attendant need to confront problems and find solutions, helped researchers and institutions to strengthen their managerial capacity. Few (13), however, identified specific management skills that had been improved. Those that did, indicated that researchers had gained the ability to: negotiate computer software dissemination rights, use computer software for projet management, produce accurate reports, effectively use the concepts of team building and teamwork.

**Learning from others (30 observations):** Beyond simply learning by doing, a number of specific actions for strengthening management capacity were identified. Training (presumably in management practices, although this was rarely stated), the use of consultants and the exposure to, or the support of, other institutions were all perceived as an important mechanisms by which management skills were imparted.

**No capacity gained (25 observations):** Some of the respondents concluded that management capacity had not been strengthened. Project failure was often equated with weak project management; therefore, when projects failed they, by definition, had not increased capacity (this interpretation of course ignores the possibility that the researchers/institutions may have learned something from their mistakes); if a training component was not built in then some PCR authors took this to mean that capacity had not been strengthened; if an institution was already capable and experienced it was assumed that they had little to gain in the area of project management skills; also, from an institutional perspective, the departure of research team members was perceived as an indication that project management had been weakened.

**Responses that provided little or no information (33 observations):** Many of the PCR authors offered less than explicit responses. Many flatly stated that management capacity had (14) or had not (3) improved without any supporting arguments. Another 16 respondents made no reference in their statements to project management.
Question 6c: This question explores whether IDRC project support contributed to researchers' or an institution's ability to sustain future research (generally, or in a specific subject area). One hundred and sixty-one PCRs responded in the note fields.

Financial support (30 observations): The ability to do research rests not only on sound scientific techniques but solid financial backing. PCRs indicated that financial constraints posed the greatest obstacle to research sustainability. Many, however, reported that the involvement of the research team or institution in an IDRC project had served to broaden their potential sources of funding. For instance, 14 PCRs indicated that the project team or institution on which they were reporting had succeeded in securing funding for future research projects either from IDRC or from other funding organizations. Another group of 17 noted the possibility that funding would be forthcoming in the near future.

Several nodes experimented with cost recovery measures to help sustain them after IDRC funding was no longer available.

Infrastructure (19 observations): One of the more tangible outcomes of IDRC’s project support is the funding of infrastructural improvements that increase the productivity and the ability of institutions to undertake research (e.g. the purchase of computer software and hardware, lab equipment, and the construction of research facilities). Nineteen applauded IDRC efforts in this area and suggested that this would help ensure that researchers and institutions continued their work.

Much of the project’s budget was used to construct a 1,500 square foot at the university. This physical upgrade left the university well-equipped to pursue future nutrition related research.

Knowledge and expertise (30 observations): A harder to measure outcome of IDRC’s project support is the knowledge gained by researchers and institutions. Thirty PCR authors suggested that project experience and this knowledge and expertise acquired would help sustain research.

Increased exposure and credibility (26 observations): PCRs reported that recipient participation in IDRC projects also helped to promote the sustainability of research in the South by giving the research team and the recipient institutions "visibility and credibility" or "recognition" in their respective countries; as well projects serve as catalysts for the creation networks that promote information sharing and collaboration which in the long-run help sustain research efforts.

The project and the following phase gave the PI visibility and credibility in his country.

The recipient institution gained significant national recognition.

No capacity gained (12 observations): In instances when there was little or no impact on research sustainability three reasons were provided: (a) the researchers/institutions were already capable so the project probably had little impact in this area; the departure of a qualified individual put the long term sustainability in question, or there was not enough capacity gained to sustain research.
Other (8 observations): eight PCRs made no reference in their statements to research capacity and, therefore, could not be categorized.

Question 6d: This question explores whether research is actually applied. Response frequencies as highlighted in Table 4 show that the majority of PCR authors viewed efforts to link research findings to utilization as "significant" or very "significant". Responses in the note fields, however, do not allow such definitive conclusions. A sure indication that the link has been made between drawing board and application is when the knowledge or technology has indeed been incorporated into policy, has made it into the marketplace or is used by the eventual users or intended beneficiaries. Only 35 of the 168 note fields completed explicitly stated that this had been accomplished. Eighteen of the 35 recorded the application of a new technology or technique, 11 the use of findings to influence or formulate policy (education, health, economic), and five the use of information systems technologies.

One possible explanation is the difficulty of measuring success in the short-term. Findings and recommendations that might influence policy only filter slowly to the top before they are finally implemented. Similarly, new techniques or technologies may eventually be adopted but the short-term view offered by the PCR does not allow us to capture these events. This is reflected in the large number of responses (70) in which PCRs expressed the potential for use of the research findings but not its actual application.

Many comments in the note fields indicated useful techniques that had or could possibly serve to increase the potential for use and application of research results. Recognizing that the absence of political will can limit the use of research results a number of research teams (respondents noted 12 instances) tried to influence public policy by cultivating contacts with government officials sometimes even including them on the team itself. Participation at the community level was deemed important for linking research results to usage by 13 PCRs.

Dissemination of research findings was also mentioned by seven respondents as an effective method of promoting application of results.

No utilization or application of research results (19 observations): The absence of research application was recorded by 15 of the PCR authors. Generally it was attributed to project failure;
four other respondents suggested that the project was at a stage where no involvement by policy makers or intended beneficiaries was possible.

*Other (33 observations):* Seventeen PCRs made no reference in their statements to research capacity and, therefore, could not be categorized.

**Results & Dissemination Recommendations**

The utilization and application of research results is influenced by the dissemination of results. Question 16c, from Section 7, *Recommendations* was therefore reviewed to further detail the Centre's record on promoting the application of research results.

**Frequencies**

Two-hundred and fifty-nine records were examined for responses to question 16c. Seventy-six note fields were completed, however, because 8 of recommendations were miscategorized the sample population used was reduced to 68. Fifty-five (80%) offer a recommendation, often with a brief explanation of the problem that elicited the recommendation. Thirteen (20%) recount a problem, but offer no recommendations. (Recommendation must be inferred.)

Seven categories were created to classify the recommendations. The categories included (1) *little or no dissemination of results - PCR authors recommend/encourage dissemination of results*; (2) *little or no dissemination of project results - PCR authors offer no solutions*; (3) *general recommendation that all projects include/improve dissemination*; (4) *dissemination did occur - highlight positive results and in many cases suggest efforts be used as a model for other projects*; (5) *a call to evaluate project results and dissemination activities*; (6) *encourage a successive phase*; and, (7) *other*.

**Overview of Recommendations**

The recommendations offered for 16c, *Results & Dissemination*, fall into seven broad categories, each of which is discussed below.

*Little or no dissemination of results - PCR authors recommend/encourage dissemination of results:* Nineteen of the 68 (28%) respondents included in the sample noted the lack of dissemination for the project they were reporting on and, as a consequence encouraged the dissemination of the research results. Beyond simply encouraging the practice itself, many PCRs authors suggested methods of realizing this objective including: designing projects with a dissemination strategy built in as an integral component; encouraging site visits, and the promotion of workshops at the village level.

*Little or no dissemination of project results - PCR authors offer no solutions:* six (9%) of the respondents simply outlined the problem - i.e. the absence of a dissemination strategy for research results. No methods for reversing this result were offered.
General recommendation that all projects include/improve dissemination: Ten (15%) of the projects offered general recommendations in support of improved dissemination strategies.

Dissemination did occur - highlight positive results and suggest as a model for other projects: Nine (13%) projects fall under this category.

A call to evaluate project results and dissemination efforts: Seven (10%) of the respondents recommended that IDRC evaluate research results and/or dissemination efforts. Three respondents suggested that IDRC evaluate research results before dissemination to confirm and validate the findings. Four believed that the Centre should return to project sites to measure the impact of the research results on the intended beneficiaries or simply to determine if dissemination efforts had proven successful.

Encourage a successive phase: Seven (10%) PCR authors encouraged the implementation of a successive phase to either refine research results, or disseminate research results, or both.

Other: Ten (15%) responses could not be easily categorized.

Cross-category theme: One issue that cut across the seven categories outlined above was the need to encourage the participation of stakeholders throughout a project's life-cycle. Indeed, Nine of 68 (13%) respondents suggested that this should be pursued as a strategy to facilitate the effective dissemination of research results.

Question 6e: This question tries to gauge the impact that IDRC funded projects may have on the research capacity of marginalized groups. The question offers several suggestions of what constitutes a marginalized group (women, ethnic minorities, etc.), but it is generally left to the PCR author to decide based on their knowledge of local social realities.

Most striking about the answers to this question was IDRC's seeming lack of focus on this issue area. Indeed, of the 93 responses in the note fields, only two suggested that the projects they reviewed made any systematic effort in project design or implementation to target marginalized researchers. One project attempted to "fill the gap in research skill" between urban and rural researchers by providing the latter group with training, workshops, symposia and lecture series in their communities; the other project, focusing on Research Training in Population and Development, "paid particular attention to increasing its reach to women." All and all, this would not seem to be a terribly impressive result for an institution that prides itself on aiding the most marginalized groups in society.

Thirty-three respondents noted some impact on the research capacity of a marginalized group. The majority of responses related the impact to the research capacity of women; ethnic minorities were never mentioned. When an impact was noted PCR authors tended to simply refer to the number of women participating as members of the research team or the number who received
some type of training; "The senior research officer, as well as 3 of 6 key members of the research team were women"; "Five of the eight students who received training through this project were women". As noted above, only two of the respondents indicated that research capacity among marginalized groups was specifically targeted for special attention. The remaining thirty-one discuss the impact on research capacity but not in the context of some overarching project strategy. We therefore do not know whether the impact measured is in fact a fortuitous outcome or a the result of some systematic effort on the part of the Centre.

Twenty-one of the respondents make it clear that the project they reviewed did not make any systematic effort to strengthen research capacity of a marginalized group. They indicate that no component to increase the research capacity of marginalized groups was built into the project they reviewed.

A large number of responses (22) were miscategorized. The majority of these discuss project impact in terms of development impact on marginalized groups and not impact on the research capacity of marginalized groups. Therefore, instead of discussing the merits of the project in terms of strengthening research capacity they refer to the positive impact the projects’ outputs (for example a new technology) may have had on marginalized groups. Because these miscategorized responses have generally been complimentary of IDRC’s efforts, they have tended to create an upward bias in the number of projects reporting positive impacts. Another 14 PCRs did not provide an explanation for their response rating in the note field.

Of course, not every project can be aimed specifically at improving the research capacity of marginalized groups. Sometimes capacity, no matter how limited, does not exist among these groups. This reality is reflected in the high number of responses that indicate that this question is "not applicable" to the project under review (30.07% for individuals and 26.45% for institutions). The large number of miscategorized responses allows little room to generalize about IDRC’s performance. Was there capacity building, but because PCR authors misinterpreted the question, they neglected to report it? Nonetheless, the poor showing in this response category needs to be reviewed in the coming months and years to see map IDRC’s performance overtime.

**Conclusion**

PCR data collection is still in its infancy, however, initial analysis of selected questions reveals some interesting trends already discernible in the data. For instance, much of the Centre’s weakness in project management was attributed to poor project monitoring. PCRs reported that Recipient project management fell short on two counts: technical and financial reporting was often delayed or of poor quality and close to half of the projects included in the sample were completed behind schedule. Finally, the majority of PCRs judged IDRC’s capacity building efforts as significant, with the greatest capacity building impact on the development of research skills.

The quantity and quality of information available was also examined. It was found that many PCRs had failed to fill in the note fields; when note fields were completed the information was of poor quality or the answers were mis-categorized (i.e. they were more appropriate as answers
to other questions). Modifications could be made to the PCR software to improve the quantity and quality of the information entered: i) have a message window pop-up when Programme Officers fail to complete note fields. The message would prompt POs to "fill in the blanks" (eg. "Are you sure you want to leave this field blank?"); ii) add a few keywords with each note field to serve as "visual cues" so that all POs work from the same terms of reference. An example of such a visual cue in the Objectives note field could be Notes: (justify your rating by explaining the factors that contributed to (un)satisfactory project management).

Broad analysis of the type conducted for this paper gives us insight into Centre-wide trends in project support and has implications at the corporate level. Another strength of the PCR system, one that might be explored in future analysis, is its ability to give program staff a readily accessible store of information to be drawn on when designing projects. For example, Centre staff can review PCRs by region, by theme, by institution, or use all three to narrow their search. In this way they can gain a sense of the strengths and weaknesses of previous programming efforts and plan accordingly. To test the efficacy of the PCR system for this type of project level analysis, and demonstrate its worth to program staff it might be useful to select a number of research areas (e.g. aids), or institutions and review the PCR database to get a sense of lessons learned at the project level.