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# MAKING *a* DIFFERENCE

## MEASURING *the* IMPACT of INFORMATION *on* DEVELOPMENT

Proceedings of a workshop  
held in Ottawa, Canada  
10 - 12 July 1995



EDITED BY  
Paul McConneil

INTERNATIONAL DEVELOPMENT RESEARCH CENTRE

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# **Assessing the Impact of Information on Policy Formulation in the Caribbean**

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**Audrey Chambers and Noel Boissiere<sup>1</sup>**

## **Background**

Research is a critical vehicle for gathering and analyzing factual information and it is, therefore, fundamental to policy formulation, both in the preparation of new policy proposals and in the support and evaluation of current policies. Research activities, however, tend to be dispersed throughout executing agencies in university, public and private sector organizations, nongovernmental organizations (NGOs), and international agencies. This factor, along with the absence of coordinated national research policies, has limited systematic, widespread access by decision-makers to the results of research.

In the Caribbean, formal subject-oriented information systems, developed over the past 15 years, have contributed to more systematic access to bibliographic information and quantitative data by policymakers. Links between the generators and potential users of research and formal information systems are now being strengthened.

For example, the Institute of Social and Economic Research (ISER); several faculties of the University of the West Indies; the Planning Institute of Jamaica (PIOJ); and the Ministries of Education, Health, Labour, and Welfare are collaborating with the Government of Jamaica (GOJ), Government of The Netherlands (GON), and the University of the West Indies (UWI) World Bank Social Policy Analysis component of the Reform of Secondary Education Project, to improve the research and analysis capabilities of these organizations. A Data Bank of social indicators on health, education, poverty and welfare in Jamaica has been established and maintained at ISER through this project and will provide statistical information and analytical services as well as technical assistance to Jamaican government organizations.

Since its inception in 1948, ISER has functioned as the focal point for social science research in the Caribbean Community (CARICOM) region. The

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<sup>1</sup>Director, Documentation and Data Centre, Institute of Social and Economic Research (ISER), University of the West Indies — Mona, Kingston, Jamaica, and Consultant, 8 Rooknest Trail, Agincourt, Ontario, Canada, M1S 3W2, respectively.

Institute has demonstrated its capacity to undertake major studies on issues critical to socioeconomic development, such as fertility, urban transportation, microenterprises, and health service management. Its role as a source of technical assistance to the governments of the region is well established rebutting the usual impractical reputation of academic research centres.

The partnership between ISER and the Central Banks is illustrative of these linkages, as monetary policymaking in the Central Banks was partially informed by the results of their research departments and the Regional Programme of Monetary Studies. The staff of the latter at ISER were sponsored by the banks for over 20 years. Another example of research impact is the Family Health International/International Centre for Research on Women/UCLA/ISER study on Sexual Decision-Making in Jamaica, which contributed major inputs into the national AIDS Committee in discussion of the design of the Jamaican AIDS/STD (Sexually Transmitted Diseases) campaign. A number of researchers in the Public Enterprise and Development in the Caribbean Project, 1978–82, which influenced the regulatory practices and pricing of utilities throughout the region at the time, eventually held or now hold ministerial and other key policymaking positions.

Recommendations of an ISER self-study task force (1991), underscored an agenda of policy studies and governance strongly linked to Caribbean development needs identified by governments, researchers, and other development actors. The challenge lay in identifying methods to improve flows of research results to information systems and identify and document mechanisms to transform these results and other policy-relevant data into products that may be used by decision-makers to resolve public problems. Furthermore, a project to identify and test indicators to monitor and evaluate the contribution of these inputs (directly accessible to the policymakers) to the policy formulation activities of the target population.

The project proposal presented to the International Development Research Centre (IDRC) was well placed to complement the Institute's mission and the initiatives of regional and national information systems. The head of the Documentation and Data Centre currently participates in the Consultative Committee on Caribbean Regional Information Services (CCCRIS), and both ISER and the Consortium Graduate School of Social Sciences (CGSSS) are participating in the regional project (funded by IDRC), Information for Decision-Making in the Caribbean Community, which is being implemented by the major regional institutions.

To explore the issues involved in implementing the proposal, ISER invited representatives from regional and national organizations to a meeting in Jamaica (19–20 October 1993) for discussion of a proposal drafted by the Institute to address this problem. The regional consultation provided a forum to discuss the

relevant concerns and expectations shared by these institutions and their constituencies, and to ascertain potential areas of cooperation. Recommendations from participants regarding the scope and methodology of the project have been incorporated into this proposal.

## **Project Objectives and Beneficiaries**

IDRC approved the project proposal presented by ISER and the CGSSS on Assessing the Impact of Information on Policy Formulation in the Caribbean in 1994. This project will develop a strategy to support priorities of the current policy agenda in the Caribbean region by assessing and strengthening the links between research, information systems, and policy formulation through:

- Analysis of the needs and information seeking habits of a sample of senior social policymakers from the English-speaking Caribbean;
- Utilization of multimedia for the development of a data bank, combining bibliographic and quantitative content and emphasizing the results of research especially that emanating from the three units of ISER and the Institute of Development Studies (IDS), University of Guyana.
- Analysis of research results, preparation of repackaging and delivery of information services on topics and issues required by the target user group;
- Development of indicators which may be used to determine the impact of the products and services on policymaking. Examples may be input into national or sectoral plans, changes in policies at various levels, or integration into legislation; and
- Assessment of the impact of these services on the user group, and the wider community, through the application of indicators to measure benefits.

Although the obvious focus in this plan of action are Caribbean policy and decision-makers, the faculty, postgraduate students, and researchers who will benefit from the specialized databases created, the indirect yet critical beneficiaries will be the members of the public who participate in the social programs/policy areas identified by the group of policymakers participating in the project.

## **Implementation**

The start-up date of the 3-year project was October 1994. ISER, as the main implementing agency, manages and coordinates the project activities and the



three supporting consultancies. The Librarian heads the project team, in consultation with the Directors of ISER and CGSSS, and with the Advisory Group, which was established at the meeting in October 1993 for this purpose.

The increased range of services and products offered and the concomitant expansion in use of the Documentation Centre required staffing beyond the single established professional post. An additional information professional and the position of Data Analyst are partly funded by the project.

Training has begun of postgraduate students (research assistants) from the CGSSS, government, management studies, and sociology departments who will be trained on an ongoing basis to assist in the analysis of information needs and the ongoing analyses and synthesis of information for the target group. The packages prepared will incorporate state-of-the art reviews on issues and cross-cutting themes identified by the target group. They will also include profiles of research projects completed and in progress and summaries of analyses of statistical indicators. The students are, primarily, technical personnel from the public sector who may have experience in identifying and synthesizing information for policymakers and, therefore, they would be well prepared to participate in this aspect of the project.

The project has drawn on and will continuously draw on the results of the concurrent regional project, Information for Decision-Making in the Caribbean Community, particularly for data from the baseline study on information needs and information-seeking behaviour, the pricing of information products and services, and the development of system guidelines regarding performance criteria and evaluation of the effectiveness of information products.

The CARICOM project, through its survey (administered through personal interviews) of 100 policy- and decision-makers throughout the region, provided background data on the information use environment and reaffirmation of the need for services and products that the ISER/CGSSS project intends to deliver.

## **Target User Group**

The target group of policymakers who will receive service throughout the life of the project is selected from senior policymakers responsible for socioeconomic policymaking. The services will be associated with the positions rather than the individuals. A nucleus of about 50 persons from institutions across the region will be chosen as the focus of study on the analysis of the impact of the use of information on the policy formulation process. The sample will permit generalization of the experience of a total of nearly 400 senior policymakers in the English-speaking Caribbean. This group will include senior and junior ministers,

permanent secretaries, and other senior personnel in the areas of economic planning, health, education, labour, social welfare, and social security.

The methodology for identifying and selecting the target user group has been elaborated by Noel Boissiere an economist and management consultant. The Boissiere report, "A Methodology for Selecting a Sample Target Group for Information Services in the Caribbean Community," summarizes the issues of identifying a sample group as defining the "target population" from within all 14 countries of the English-speaking Caribbean, selecting from among these the "sample population" of senior policymakers in selected countries and choosing the sample size appropriate for this study.

A stratified sample was used as recommended by Boissiere because of three key considerations:

- The interest in detecting any unique country differences in the impact of the services and in distinguishing the results by country,
- The desirability of making sure that certain key institutions and policymakers are included in the sample, and
- Considerations of the nature of the target population, the likelihood of response, and the willingness to participate for individuals chosen on a random basis.

At the first level of stratification — geographic — the region is divided into five country subgroups: Jamaica, Trinidad and Tobago, Barbados, Guyana, and Dominica. The second level of stratification addresses the sample population as the nucleus formed by the target user group selected from the following institutional units:

### **Direct Policymakers**

- Senior government policymakers, that is, the minister, the permanent secretary, the special advisor, the senior economist or senior technocrat in all ministries (with special emphasis on the Ministry of Finance);
- Governors of the Central Banks, deputy governors, the directors of research;
- Heads and deputy heads of semiautonomous institutions, such as the National Planning Institute, the Industrial Development Corporations;
- Heads and deputy heads of major regional organizations such as the CARICOM Secretariat, Organization of Eastern Caribbean States (OECS), Caribbean Development Bank, Eastern Caribbean States Export Development Agency (ECSEDA);

- The University of the West Indies and the University of Guyana;
- Private consultants;
- Persons who serve in an advisory capacity to the prime minister; and
- Leader (or representative) of the opposition party in parliament.

The final three subgroups were included at the suggestion of the regional workshop group.

## **Indirect Policymakers:**

### **Private Sector Organizations**

- The media
- Religious groups
- Trade unions and NGOs
- Chambers of commerce

The final level of stratification is sample size. Determination of the numbers included in the table reflects the choice of the sample based on the geographical and institutional subgroups, knowledge of the region, and informed judgment. The method of selection has the advantage of flexibility and allows for changes in the sample size and for updating of the sample as conditions suggest.

## **User Needs**

Once the total target group has been selected, the survey of participants (in progress) will be completed both to record the articulated needs of the target group and to permit the assessment and interpretation of the findings. The survey instrument to be used is an adaptation of the questionnaire designed within the project Information for Decision-Making in the Caribbean Community and exemplifies the cooperation alluded to earlier through testing the tools developed by the peer project.

## **Information Base**

Depending on the topics identified as critical by the user group and the project team, the Documentation and Data Centre will develop guidelines for the analysis, distillation, synthesis, and distribution of data from the textual and statistical information sources. Information on priority topics will be culled, encapsulated, and repackaged for delivery to the relevant users within and outside the target group. The information base that will support the services will be

composed of the bibliographic database of the holdings of the ISER Documentation and Data Centre, the quantitative databases held in the Data Bank, the research in progress files of university, private and public sector resources, and the database containing the analyses of the research results.

A consultant will be contracted to implement a program for sensitizing the members of the target group and other policy-makers specifically, on the value and cost of research results and other information in the development process. National and regional meetings of policymakers provide a ready-made forum for such briefings. The consultant will also design a public awareness program that will be promulgated through the media.

## **Evaluation**

As constant feedback and evaluation is required from the participating members of the target group from the very start of this project, a consultant was engaged late in 1994 to review system activities. This evaluation is aimed at demonstrating to policymakers as users, and as planners responsible for allocating resources, the role of information systems in this area.

This review will involve the participation in the users' meetings and evaluation of:

- The quality of the products and services provided to the sample of the target group;
  - The effectiveness of the information in relation to the users' earlier and ongoing determinations of value derived, and
  - Utilization of the research results in the policy formulation process.
- It will also recommend options and directions for future development.

The consultant will be responsible also for collecting data for the baseline study on the information use environment, developing consensus on externalities affecting the latter, and analyzing the survey findings in relation to specific benefits expected by users.

## **Telecommunications**

Communication channels within the project among the sample of policymakers and the project team will be through electronic data exchange and the ISER Policy Newsletter. Participants will be encouraged to adopt electronic mail as the primary instrument for requesting document transfer and for transmitting evaluations. The ECLAC/AMBIONET (Economic Commission for

Latin America and the Caribbean) Information Exchange System, located in Trinidad and Tobago, will provide the backbone for the interchange of data communication. To ensure speedy uptake of the messaging technology by the sample group, the project will provide modems required for electronic data exchange.

There is a strong perception of a lack of responsiveness on the part of the telecommunications authorities to the current innovations in computer-based communications now available to the Caribbean. The services provided will also be used to provide a demonstration effect of the role and value of this type of facility in linking the university and its research results with implementing agencies. If their experience within the project is deemed successful, policymakers participating in this pilot study will have a clearer understanding of the value of data communications and will be expected to influence the direction of national and regional data communications policies.

## **Regional Workshop**

The initial meeting was convened in January 1995 of a small number of participants, representative of the target group, the consultants on evaluation and the development of indicators, and the coordinators of the CARICOM Decision-Making Project and ECLAC/AMBIONET system. The purpose was to elucidate the project objectives and modus operandi, to offer technical briefing and training of the target group in the use of the electronic ECLAC/AMBIONET messaging system and a brief introduction to the Internet. In particular, participants provided critical feedback on the indicators under development as well as on the content and format of the sample presentations of research results prepared for the meeting.

## **Development of Indicators**

### **Methodology/Object of Assessment**

The consultant's seminal paper on potential indicators to measure the impact of the information provided to the project's constituency — policymakers in the Caribbean region — provided the starting block for the in-depth discussion at the regional workshop. A synthesis of both the paper and the recommendations are detailed in this section.

The object of the current assessment process is information services provided by ISER. "Information services" represents a wide range of services and,

for practical purposes, specification of the object services is necessary.

One aspect of the IDRC program concerns information technologies and matching the technology with the information. The current project will be using almost exclusively the electronic mail system and electronic data exchange, and the assessment will focus on the following specific services:

- Flows of research results to information systems and the production of information packages tailor-made for assimilation by policy makers;
- Selected dissemination of information (SDI) service: facilitated access to information through the interface of data bases with electronic information exchange systems; and
- Reference information service and online database searching service.

These services are being assessed from the perspective of the users/beneficiaries and policymakers of the region.

### **Impact Assessment Indicators**

Indicators are being used to determine the degree to which a project or activity succeeds or fails in meeting stated general needs and objectives, in using resources efficiently, and in achieving expected results. Furthermore, it is acknowledged that assessment of the impact of information cannot be a one-time exercise. On the contrary, it is based on the following principles:

- The assessment process is a user-driven, ongoing process;
- Not all indicators will apply in any given situation; and
- The target audiences (those who will use the results of the assessment) are clearly identified.

Three categories of potential audiences are considered: decision-makers and policymakers, information managers and information-system users, and funding agencies.

In extracting from the deliberations of the computer conference and discussions at the postconference workshop, basically three types of indicators were proposed as practical for the project Information for Decision-Making in the Caribbean Community:

- Performance indicators: "relating inputs to outputs"
- Effectiveness indicators: "relating outputs to usage"
- Impact indicators: "relating usage to outcomes and domain characteristics" (Menou 1993, p. 97).

This already represents a reduction in the number of five types of assessment indicators originally discussed (Menou 1993, p. 97). When the focus

is directed to those indicators that practitioners judge to be capable of being put into operation, a further pruning is suggested. The main reason for the reduction is the difficulty of data collection and time constraints involved in implementing measurement where cost indicators are concerned. Furthermore, the information added by distinguishing between performance indicators and impact indicators appears not great enough to warrant separate treatment. Consequently, assessment indicators used in the current case are compressed into a combination of performance/impact indicators. Essentially, these are indicators derived as a consequence of use of the information services and relate usage (input factors) to outcomes (output benefits).

The seven impact indicators listed in the following relate to the consequence of use of the information services provided. Some are by nature also the benefits derived from access to and use of the information services. Although they are all intended to serve as measurements, some are quantifiable and others are nonquantifiable or qualitative. It is recognized that the priority given to each measure varies with the user; however, discussions at the meeting led to the following presentation of indicators in order of importance:

### **Outcomes/Benefits**

- User satisfaction. This incorporates the concept of the degree of satisfaction relative to the investment of effort and money to acquire the information. This is initially a qualitative measure, and anecdotal evidence can be used in its determination. At the empirical level, satisfaction can be determined by Needs Met by the service. The value of an information service clearly lies in its ability to fulfill a specific need. Needs Met can be further subdivided in various ways, e.g., into (a) short-term or immediate need for specific information, and (b) medium- and long-term needs for more general information. Although not a measure of benefit, needs not met by the service could also be identified at this point.

### **Status Measures**

- Use per capita (frequency of use of the services) in the Target User Group.
- Number of users in the wider "target population". This measure reflects both access to the technology for using the service as well as its actual use.

## **Other Measures**

- Time saved (for the user) by using the information service provided. Considerable debate arose around the issue of whether time for the busy policy maker was indeed saved in view of the large volume of information made accessible.

In addition, the time spent learning how to search was also a factor. It was pointed out that:

- (a) Searching could be made manageable through the literature review,
  - (b) Packaging and dissemination of research findings would indeed save time, and
  - (c) User training and experience in the techniques of information searches would help to reduce the time used.
- Improved analysis and decision-making in terms of quality, coverage, and timeliness of the material informing the decision-making process.
  - Improvement in preparedness, skills, and effectiveness in negotiations.
  - Access to information and ideas through contact with colleagues and others who have worked or may be working on the same issues in distant places.

## **Qualitative Characteristics of Information Provided**

The nature and quality of the information provided would have a bearing on user satisfaction. Timeliness, reliability, and relevance are basic desirable characteristics. In the context of the Caribbean, where there is both the expression of concern with lack of data and with the inadequate use of information that is provided or can be provided, it is all the more important to reflect on the nature of information needed by the policymakers.

In the current project, needs surveys have been conducted and the results will be incorporated in plans for the future. The surveys no doubt capture the need for information in the realm of ideas and alternative lines of action in addition to a need for facts and direct data; that is, the urgent need in many developing countries for what has been called "coping information," which can be interpreted to mean information to assist policymakers in coping with the myriad of problems and decisions faced.



## **Measurement of Impact**

Surveys should be used to gather measurement data, and as the method for identifying and assessing the links between provision of the new information services and impact in policy formulation. In the first instance, surveys can be used to determine the extent of use of the services, and the consequences of that use in terms of informing policy formulation. In these measurement surveys, emphasis would be placed on the attributes of simplicity of structure in data collection and capacity for straightforward interpretation of the ratios or indices generated to measure impact. A critical factor to be incorporated in the measurement process is that measurements must be designed to record not only the status at a given time, but must also have the ability to record change over the period of the project to analyze feedback, improvements suggested and executed, or lack of change.

An example of the proposed measurement framework is outlined in Table 1, which illustrates the basic parameters that must be incorporated. Expansions and greater detail are envisaged in the actual survey work.

The matrix in Table 1 is based on the format devised in the postcomputer conference workshop — Preliminary Framework for Impact Assessment (Menou 1993, pp. 101–102) — in which input factors are linked with output benefits to produce indices (indicators) of impact. These indices must then be analyzed and interpreted as indicative of strong or weak impact of the information services in informing policy formulation.

### **Hierarchy and Weighting**

The purpose of the survey is to determine how the users rate their experience in terms of benefits derived, that is, benefits related directly or indirectly to policy formulation. A good experience in terms of benefits derived in the areas specified (relative to benefits expected) could be interpreted as indicative of positive impact of the service in informing policymakers.

The survey obtains the user's subjective responses, based on individual experience or impressions, and puts them into an objective framework of predetermined weights and measures of importance for judging impact. The proposed impact indicators are listed according to the hierarchy of significance assigned at the meeting of policymakers of January 1995. A further subdivision distinguishes between Impact Indicators, derived as a consequence of use of a service, and Effectiveness Indicators, measuring the status of use at any particular time.

**Table 1. Creating index numbers to measure impact indicators.**

**Illustration of the impact of selected information services in policy formulation.**

**A. Recording of acknowledgment of a benefit derived from using a service.**

| Outputs                    |   |                   |              |               |                      |                   |         |                          |                 |                  |                |       |       |
|----------------------------|---|-------------------|--------------|---------------|----------------------|-------------------|---------|--------------------------|-----------------|------------------|----------------|-------|-------|
| I<br>N<br>P<br>U<br>T<br>S | Impact Indicators (Consequences of Use) |                   |              |               |                      |                   |         | Effectiveness Indicators |                 |                  |                |       |       |
|                            | Outcomes / Benefits                     |                   |              |               |                      |                   |         | Status Measures          |                 |                  |                |       |       |
|                            |   | Satis-<br>faction | Needs<br>Met | Time<br>Saved | Improved<br>Analysis | Nego-<br>tiations | Contact | Freq'y of<br>Use         | No. Of<br>Users | Users<br>per Cap | Ease<br>of Use |       |       |
|                            | Weights                                 | 25                | 25           | 5             | 15                   | 10                | 5       | 15                       | 10              | 5                | 5              |       |       |
|                            |   | Qn Ql             | Qn Ql        | Qn Ql         | Qn Ql                | Qn Ql             | Qn Ql   | Qn Ql                    | Qn Ql           | Qn Ql            | Qn Ql          | Qn Ql | Qn Ql |
|                            | Usage                                   |                   |              |               |                      |                   |         |                          |                 |                  |                |       |       |
|                            | Research<br>Results                     |                   | x            | x             |                      |                   |         |                          |                 |                  |                |       |       |
|                            | Access to<br>Databases                  |                   |              | x             |                      | x                 |         |                          |                 |                  |                |       |       |
|                            | Reference<br>Info. Ser's                |                   |              |               |                      |                   |         |                          |                 |                  |                |       |       |
|                            | Other<br>Services                       |                   |              |               |                      |                   |         |                          |                 |                  |                |       |       |

**B. Recordings of ratings of the user, on a scale of 1–5. (Table 1. Continued)**

| Outputs                    |   |                   |              |               |                      |                   |                          |                  |                 |                  |                |
|----------------------------|---|-------------------|--------------|---------------|----------------------|-------------------|--------------------------|------------------|-----------------|------------------|----------------|
| I<br>N<br>P<br>U<br>T<br>S | Impact Indicators (Consequences of Use) |                   |              |               |                      |                   | Effectiveness Indicators |                  |                 |                  |                |
|                            | Outcomes / Benefits                     |                   |              |               |                      |                   | Status Measures          |                  |                 |                  |                |
|                            |   | Satis-<br>faction | Needs<br>Met | Time<br>Saved | Improved<br>Analysis | Nego-<br>tiations | Contact                  | Freq'y of<br>Use | No. Of<br>Users | Users<br>per Cap | Ease<br>of Use |
|                            | Weights                                 | 25                | 25           | 5             | 15                   | 10                | 5                        | 15               | 10              | 5                | 5              |
|                            |   | Qn   Ql           | Qn Ql        | Qn   Ql       | Qn   Ql              | Qn   Ql           | Qn   Ql                  | Qn   Ql          | Qn   Ql         | Qn   Ql          | Qn   Ql        |
|                            | Usage                                   |                   |              |               |                      |                   |                          |                  |                 |                  |                |
|                            | Research<br>Results                     |                   | 4            | 3             |                      |                   |                          |                  |                 |                  |                |
|                            | Access to<br>Databases                  |                   |              | 5             |                      | 5                 |                          |                  |                 |                  |                |
|                            | Reference<br>Info. Ser's                |                   |              |               |                      |                   |                          |                  |                 |                  |                |
|                            | Other<br>Services                       |                   |              |               |                      |                   |                          |                  |                 |                  |                |

**C. Indices generated: Ratings x Weights. (Table 1. Concluded)**

| Outputs                    |   |                   |              |               |                      |                   |         |                          |                 |                  |                |
|----------------------------|---|-------------------|--------------|---------------|----------------------|-------------------|---------|--------------------------|-----------------|------------------|----------------|
| I<br>N<br>P<br>U<br>T<br>S | Impact Indicators (Consequences of Use) |                   |              |               |                      |                   |         | Effectiveness Indicators |                 |                  |                |
|                            | Outcomes / Benefits                     |                   |              |               |                      |                   |         | Status Measures          |                 |                  |                |
|                            |   | Satis-<br>faction | Needs<br>Met | Time<br>Saved | Improved<br>Analysis | Nego-<br>tiations | Contact | Freq'y of<br>Use         | No. Of<br>Users | Users<br>per Cap | Ease<br>of Use |
|                            | Weights                                 | 25                | 25           | 5             | 15                   | 10                | 5       | 15                       | 10              | 5                | 5              |
|                            |   | Qn   Ql           | Qn   Ql      | Qn   Ql       | Qn   Ql              | Qn   Ql           | Qn   Ql | Qn   Ql                  | Qn   Ql         | Qn   Ql          | Qn   Ql        |
|                            | Usage                                   |                   |              |               |                      |                   |         |                          |                 |                  |                |
|                            | Research<br>Results                     |                   | 100          | 15            |                      |                   |         |                          |                 |                  |                |
|                            | Access to<br>Databases                  |                   |              | 25            |                      | 50                |         |                          |                 |                  |                |
|                            | Reference<br>Info. Ser's                |                   |              |               |                      |                   |         |                          |                 |                  |                |
|                            | Other<br>Services                       |                   |              |               |                      |                   |         |                          |                 |                  |                |

Note: Qn = Quantitative, Ql = Qualitative.

Although User Satisfaction was already assigned top position in the hierarchy listing, a further numerical weighting is used to indicate the degree of importance assigned to this element relative to the other indicators when determining impact. A good grade scored for User Satisfaction and Needs Met is thereby deemed to carry much greater weight than a good grade scored in Time Saved when assessing impact of this service on policy formulation. The following is an example of suggested weights that may be used to show the importance given to each indicator:

| Hierarchy                       | Rank Assigned | Weight | Degree of Importance |
|---------------------------------|---------------|--------|----------------------|
| <b>Impact Indicators</b>        |               |        |                      |
| User Satisfaction               | #1            |        | 25                   |
| Needs Met                       |               |        | 25                   |
| Time saved                      | #4            |        | 5                    |
| Improved Analyses               | #5            |        | 15                   |
| Negotiations Preparedness       | #6            |        | 10                   |
| Access to Others                | #7            |        | 5                    |
| <b>Effectiveness Indicators</b> |               |        |                      |
| Frequency of Use                | #2            |        | 15                   |
| Number of Users                 | #3            |        | 10                   |
| Ease of Use                     |               |        | 5                    |

Table 1 illustrates the steps by which a matrix could be completed to yield indices as measurements of various impact indicators. In other words, measures of specified categories of benefits (outputs) derived by Target Group Users as a consequence of using specific information services/products provided (inputs). For any given time period, the user will:

- (a) Be asked to state whether any benefit was received from using the specific service within the categories specified. An "x" is placed in the appropriate cell to indicate a *quantifiable* (Qn) benefit or a *qualitative* (Ql) benefit if applicable;
- (b) Rate his/her experience in using the service by evaluating the strength of the benefits received on a simple scale. The scale suggested is: 1 – weak, 2 – below average, 3 – average, 4 – above average, and 5 – strong.

The rating of the experience of using the service is then multiplied by the weight assigned to the particular indicator, thereby producing an index number,

which can be used for comparison over time, of user, type of service, etc., to analyze impact. Indices of measurement can be made in terms of all seven indicators or for more detailed subgroups of each indicator, as considered appropriate.

### Example 1:

The information service being assessed is "Packaged Research Results." A user of the service may rate his/her experience in the following manner: User Satisfaction/Needs Met (an output benefit or impact indicator) is given a rating of 4; Time Saved is given a rating of 3. The resulting indices on this occasion are 100 and 15:

|              | Rating |   | Weight |   | Index |
|--------------|--------|---|--------|---|-------|
| Satisfaction | 4      | x | 25     | = | 100   |
| Time Saved   | 3      | x | 5      | = | 15    |

### Example 2:

A specific delivery of services may be considered very beneficial against needs expressed. For the service Access to Databases, Time Saved is given a rating of 5, Negotiations Preparedness, is also given a rating of 5. The indices calculated are 25 and 50:

|                           | Rating |   | Weight |   | Index |
|---------------------------|--------|---|--------|---|-------|
| Time Saved                | 5      | x | 5      | = | 25    |
| Negotiations Preparedness | 5      | x | 10     | = | 50    |

Initially, relative index numbers derived would be interpreted as indicative of a strong or weak impact in analyzing progress or changes over the period, by user, institution, country, etc. In analyzing the significance of these indices, the evaluator must then interpret the degree to which the indices translate into a statement that the service has made a difference to the policymaking resources and capability of the user.

Indicators may be further subdivided or other distinctions made. For example, specific Needs Met by the service Research Results could be distinguished and may be rated separately. A distinction can usefully be made between:

- Direct benefits, or immediate, short-term benefits, e.g., did the use of the information service solve or assist in solving the particular problem for which the information was sought?
- Indirect benefits or medium- and long-term benefits, e.g., general or specific enlightenment, attitudinal changes that inform policymaking.

Table 1 is given for illustrative purposes only and other details may be added where considered necessary. For instance, the status indicators of Number of Users and Frequency of Use may be further extended to reflect the kind of use to which the information service is put, for example, for cabinet briefings, etc., as opposed to individual interest and personal development, in which case the link with policy formulation would be more tenuous. Weights assigned to the indicators are suggested but by no means carved in stone. Ongoing contact with the Target User Group is likely to lead to adjustments of the relative weights to derive more appropriate measurements. The essential initial first step is to register the existence of a particular benefit from the service provided.

Although not all users may agree with the weighting assigned to each indicator, the same weights will be maintained for all members of the Target Group in any one round of the survey for comparison and analysis. Surveys related to indicator measurement would be carried out periodically (6 months being the proposed interval); four or five such surveys are expected to be conducted during the course of the project. It was agreed that questions related to the implementation of the measurement procedures would be incorporated in the ongoing survey work, which will be administered by the consultant for evaluation.

## **Conclusion**

The preceding section on methodology hints at the expected challenges and uncertainties, which will inevitably persist as the project progresses. A plethora of questions and issues to be addressed have arisen from the interaction during both the pre-planning meeting and the regional workshop, including:

- Evaluation instruments will accompany the response to specific inquiries by members of the target group for immediate assessment by the recipient. In the majority of cases, the evaluation questionnaire will be forwarded, after a prescribed period of several weeks, following the delivery of an information package. The latter situation presents distinct problems in pinpointing the use of the contents of the package, which has now been transformed as part of the individual's knowledge base.

- Positions, not individuals, will be the focus of the service; yet, political and administrative shifts will require accommodation within the project of office-holders who may be "disengaged." Furthermore, technocrats expressed their concern that the service should be directed to both a policymaker and a technocrat from the former's office to maximize effective use of the disseminated material.
- Some members of the target group urged that efforts be made to identify benefits lost if a participant is unaware that critical information is available through local systems, for example, the expense (procurement costs and time expended) in sourcing data from outside the region.
- The preferred method of delivery of information is through electronic channels, which offer rapid, cost-efficient access. The potential resistance to largely unfamiliar communications

## **References**

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