

Approaches to impact evaluation (assessment) in agricultural information management:

**selective review of the issues, the relevant
literature and some illustrative case studies**

Margot Bellamy

November 2000

CTA Working Document Number 8021

This review was commissioned by the Technical Centre for Agricultural and Rural Cooperation (CTA) in 2000.

CTA's working document series consists of material that in view of its immediate relevance and practical utility to specific readerships the Centre wishes to make available without the delays inherent in the formal publication process. These working documents have not yet undergone technical editing by CTA and should be cited accordingly. Comments on matters of substance are welcome, and should be addressed directly to CTA.

CONTENTS

	<i>Page</i>
Introduction	1
The role of evaluation in the development process	1
Who needs to evaluate the impact of information	2
What is ‘impact evaluation’ or ‘impact assessment’?	5
Rationale for impact assessment	8
Appropriate methodologies	8
Impact assessment in information science	11
Impact studies in ‘information for development’	12
Case studies	16
Conclusions	18
APPENDIX I, References	21
APPENDIX II, Case studies	25

Abstract

Evaluation (or assessment) of impact is generally regarded as an essential part of the project cycle, and is already well known and widely used in many disciplines - for example, environmental and social sciences, social psychology - and there is increasing evidence of its application to agricultural research. The same pressures as are being felt in agricultural research apply in agricultural information: new technology, in the form of information and communication technologies (ICTs) is increasing the ability to access, collect, process and generate information, but there is also pressure to justify investment, and to demonstrate results (benefits). However, while the 'information/knowledge' culture may be burgeoning due to new ICTs, neither the methodology nor the culture of information impact studies is yet fully developed. There are as yet few methodologies and applications relating to information management in developing countries, and even fewer which have been or could be applied specifically to agricultural information management. This selective review seeks to engender wider knowledge, acceptance and application of evaluation in the field of agricultural information management by showing how it has been approached in other disciplines, in agricultural research, and most recently in information science and management, with some key examples relating to information management in developing countries. Finally, to give some indication of how it works in practice, some recent examples as applied to information management in developing countries are summarised as case studies.

Introduction

This review examines the background to impact evaluation (or assessment) and its application, as indicated in the literature of a range of disciplines, and why it is needed, in general terms and more specifically in agricultural information management in developing countries. It comments on the value and relevance of the methodology so far available, and the findings of relevant case studies, to seek lessons and guidelines for future evaluation or impact studies in CTA. It does not seek to be exhaustive, but rather to select from among the available general and applied studies, including some of CTA's own experience and documents, the most useful pointers to future methodology and analysis. It draws selectively on the literature of development economics, environmental and social impact assessment, as well as information science and management, and from work in the field of agricultural research management. Particular effort has been made to select references which themselves review definitions, trends, methodologies and applications in their respective fields, and which in many cases also provide extensive bibliographies. There are also some important recent examples of applied work done on information management in developing countries which indicate the state of the art, and some of the pitfalls, but also help to define the way forward.

The role of evaluation in the development process

The increased use of impact evaluation or assessment techniques and development of criteria for their use among the development community demonstrate their growing importance. Bottom line issues are generally return on investment for the provider of funds, accountability, and the need for the recipient to be able to justify the case for further funding. In the report of an ECART/ASARECA/CTA workshop on impact assessment as applied to agricultural research, held in Uganda in November 1999, this concept was expressed thus: 'Limited resources, together with questions about the social, economic and environmental impact of new technologies have increased the need for impact assessment and evaluation to an extent rarely experienced in the history of agricultural research'. (CTA, 1999). One could easily replace 'agricultural research' with 'information' in this

statement in the context of this paper.

However, the concern of this paper is not simply impact evaluation or assessment as a requirement or methodological tool for the international development community. Nor, although it is often undertaken at the instigation of donors, is it needed only in the context of externally funded projects. For it to be fully effective as part of the development process, an institution has to develop an 'impact culture'. Evaluation should be part of the toolkit of development in local management information systems and project management, with methodologies and criteria adapted to local needs and capacity. This process can be facilitated through organisational learning. The Uganda workshop (CTA, 1999, *op. cit.*) also tackled this aspect, by identifying the following conditions for institutionalising evaluation procedures, which can be adapted to the information/knowledge management context:

- A conceptual framework that distinguishes institutional levels for evaluation work, stating tasks, frequency and resources
- An organisational framework to generate and use impact assessments to be developed and built into the existing (research/information) process and decision making system
- Definition of responsibilities for evaluation up to the top management level
- Motivation to do evaluation by sensitising managers and others as to its usefulness
- Encouragement through reward for involvement in the development process, i. e. exercises such as evaluation, as well as for research

Who needs to evaluate the impact information?

In the context of information impact, the concern is to identify potential users, and their needs, and to set a framework for methodology to meet those needs.

These groups may be the providers of funds for the project, the policy makers who have endorsed the project, researchers or information managers who receive raw data, or the next level of beneficiaries for whom the information was ultimately intended, such as farmers, rural co-operatives and women's groups. However, there are both micro- and macro-level aspects to be examined, i.e., not just the impact of access to content, and the impact of providing a service, but

broader aspects, such as policy and resource implications.

Another way of looking at demand (or need) generates the following categories:

- general level (macro level, i. e., impact of information or an information service in the context of overall economic development) - needed at organisation or strategic level, for policy makers, planners, senior managers, donors - there needs to be a close relationship between evaluation of impact and strategic planning/policy making
- (agricultural) research level (results) - impact of access to information at programme level, research/project managers, extension, farmers - Were research objectives met? Did information access make a difference? If so, what difference? Can it be measured?
- information/knowledge management - impact of information at practitioner level, i. e., managers, information providers, librarians, extension workers, for onward transmission to users - Could they offer a better service? Answer more queries?

Thus, everyone involved in the project cycle, from donors through policy makers, planners, managers, researchers and end beneficiaries/users have a stake in the success or failure of a project, and thus in evaluating or assessing its impact.

The needs of different groups may require different approaches, different types of data on impact, different time frames. They may wish to evaluate how well information needs have been met in terms of sources, content and medium of delivery, as well as determining whether and how far availability of information has 'made a difference' - has it saved time, avoided duplication, solved a problem, avoided an emergency, reduced costs? - What has it been used for? By whom? Over what time period? By what media? The concern is to assess whether that investment has been worthwhile, both in itself, in terms of meeting the objective of the project or investment, and in comparison with other ways of spending the same funds.

It is very easy for methodologies to become an end in themselves, and there was until recently no general methodology, or practical guide, to how to 'do' impact evaluation a routine activity in the working environments with which we are all most familiar. IDRC has come closest, in Anne Whyte's recent 'Assessing community telecentres: guidelines for researchers', which develops a methodology

to support research and evaluation studies of community telecentres, particularly in Africa, and this work could usefully be used as a benchmark for other such sets of guidelines. And it is also worth looking at how development agencies have developed user-friendly handbooks; an example is the Frances Rubin's 'Basic guide to evaluation for development workers' (Oxfam, 1995).

The main concern is to make the process 'user friendly', and to develop a set of tools which can be adapted to the range of situations in which developing country information managers may find themselves. We take these methodologies, and some of the recent case studies, to see what lessons can be drawn and what guidelines or indicators can be developed. The paper interprets methodologies and uses case study examples to show what works and what doesn't, what is essential and what is not.

There is quite a learning curve for both individuals and institutions in adopting and implementing impact evaluation procedures. Mention has already been made of organisational learning. This requires:

- Defining both supply of and demand for evaluation in the given context
- Consistent and common understanding of concepts and terms
- Raising awareness among managers
- Implementation of a participatory approach to planning and evaluation
- Clear definition of intended impacts of programmes and indicators or milestones based on objectives
- Defining data required at programme design stage, and implementing low-cost ways of collecting it
- Making evaluation mandatory for all projects and programmes
- Ensuring internal discussion of results
- Assigning responsibilities
- Providing training

It is essential to have a methodology in place which everyone can 'own', and which can be scaled up or down in relation to the size and objectives of the programme (investment) and the capacity of the people doing it. Otherwise it won't happen. The case studies discussed briefly in the main paper and summarized in Appendix II show the ways in which IA has been tackled in environments with which we may be quite familiar, and provide some guidelines

on what has and has not worked, and why.

What is ‘impact evaluation’ or ‘impact assessment’?

In any project, and throughout the project cycle, there is need not only for routine collection of data through monitoring or continuous assessment, for which management information systems are essential, but also for evaluation and assessment of impact. The latter requires a longer time span, larger population, and use of comparative analytical techniques. Impact studies aim to measure not only the reactions of the beneficiaries and the outputs generated by them, but also the proportion of any discernible change attributable to the project. These definitions were established in the 1980s by the World Bank and others, and are still extant among the international development community, albeit with customised methodologies and criteria.

There are generally considered to be clear and important differences between ‘monitoring’ and ‘impact evaluation’ (or ‘impact assessment’), both of which have a place in the project cycle. Some definitions from a joint Bank/IFAD/FAO study (Casley and Kumar, 1987) are both helpful and succinct:

‘Monitoring is continuous assessment both of the functioning of the project activities in the context of implementation schedules and of the use of project inputs by targeted populations in the context of design expectations. It is an internal project activity, an essential part of good management practice, and therefore an integral part of day-to-day management.’

‘Evaluation [assessment] is a periodic assessment of the relevance, performance, efficiency and impact of the project in the context of its stated objectives. The full exercise of the evaluation function will require, in selective cases, supplementing the project management information system with data from impact studies that may be designed and executed outside the project management system itself.’

There are important linkages between monitoring and evaluation, but also some important differences. While the same data collection and analysis systems may

be used, and the indicators required for monitoring may be included in the range of information required for evaluation, evaluation involves a longer time span, the use of comparative analytical techniques, and a larger group of users.

The assumption throughout is that mechanisms will be in place to collect the relevant data on a regular basis throughout a project, which makes the routine monitoring and evaluation relatively straightforward, and they can be integrated into the management system. However, formal impact evaluation (assessment) is more problematic, and thus the most difficult of the evaluation processes to undertake. It involves not only the reactions of the beneficiaries and the outputs generated by them, but also measurement of the change which has come about, and, even more difficult, the proportion of this change that is attributable to the project. It is time-consuming and requires information that is not a feasible basis for the management's decisions about implementation. It is thus often only the national or external financing institution that can carry it out.

The development economist's view (Mosley 1997) is that impact assessment [evaluation] is the grandchild of welfare economics, by way of social cost-benefit analysis. Mosley argues that there are three questions which the authors of impact assessments need to answer:

- What was the net benefit conferred by the intervention (or project), i.e., the difference between the with-project and without project situation?
- How did that benefit divide up between the different parties affected by the intervention?
- By what causal process did the benefits and costs revealed by (1) and (2) materialise? What are the lessons for designers of future interventions of this type?

He uses the terms 'impact assessment' and 'impact evaluation' interchangeably to mean an attempt to find out the effects of an intervention after it has occurred, and the term appraisal to mean an attempt to predict the effects of an intervention before it occurs.

Barrow (1997), another development economist, is particularly concerned with environmental and social impact assessment (EIA and SIA), making the point that the discipline of impact assessment, which has been around for some 25 years in a recognisable form, is dominated by EIA. In his glossary he defines

‘assessment’ as ‘an evaluation in as objective a manner as possible but not necessarily quantitative or verified by experiment’, and ‘impact’ as ‘a change resulting from some development, often synonymous with ‘effect’ and manifest through an observable change in some parameters.’ One can extrapolate the definition of EIA into any impact assessment situation, ‘a process that seeks to blend administration, planning, analysis and public involvement in assessment prior to the taking of a decision’, or, more succinctly, ‘an approach which seeks to improve development by a-priori assessment’. This is more than a ‘common sense approach to development’; it can be a policy instrument, a planning tool, or a means of public involvement. Barrow also argues that in spite of differences in the respective literatures and in attitudes and backgrounds of practitioners, EIA, SIA and many related activities have much in common, especially with respect to aims, procedures and processes, in that they all: focus on effects; adopt (or should adopt) a future (proactive) orientation; and adopt a systematic, focused, interdisciplinary and comprehensive and generally iterative approach.

One of the most important common conclusions to emerge is that impact assessment relies on both formal and informal methodologies, and is a mix of objective and subjective analysis. There is also common consensus that the methodology and the process must be established from the outset of the project, not introduced post hoc. This has obvious implications in project design, and in the terms of reference of those carrying out projects, as well as imposing a discipline on whoever is commissioning and ultimately managing the programme within which the project falls to set guidelines and insist on the process being followed.

Several of the multi- and bi-lateral development agencies (e.g., World Bank, DFID, UNIDO) have established methodologies for impact assessment of a wide range of project types (see Mosley, *op cit.*, for some examples) and there are also examples in the library and information science (LIS) field. Some of these are discussed in the appropriate sections below.

Rationale for impact assessment

Two major purposes are defined by Mosley, both of which are valid in the context of information services (projects).

— Assessment of impact in as precise a manner as possible, taking into account

indirect, long-term and unintended effects of an intervention (project) that can then be used for purposes of institutional development and public relations (typically this is valued more strongly by researchers, policy makers and planning and public relations staff of development agencies);

- Learning lessons that can be fed back into subsequent phases of the same intervention in the field (valued by field workers/project managers).

Barrow notes a spectrum of attitudes towards impact assessment, ranging from the view that it is no more than a required procedure, to the idea that it has a vital role to play in improving management and planning and achieving sustainable development.

Clearly, from the donors' and the beneficiaries' viewpoints, there must be demonstration of a return on investment and of measurable benefits, and some estimation of the relative merits of the chosen option versus others available at the time. There may be specific measurables, such as increased productivity resulting from a new technology. There is a growing body of literature from a wide range of disciplines, and a sufficiently long history of assessment in some fields, to be able to achieve this, but not in the area of information for development. Ironically, it is possible to measure both objectively and subjectively the impact of introducing a new technology, such as a new crop variety, in agriculture (in terms of changes in farming practice, increased output, effect on farm income, improved livelihoods, etc), but not of a new piece of information leading to adoption of that technology.

Appropriate methodologies

Mosley also comments that impact assessment is split between two polar alternatives, the 'rigorous' and the 'subjective'. For economic analysis, this consists of going back to the principle of ex-post rate of return assessment, but acknowledging that objectives and instruments are now multiple, requiring a score to be calculated for a range of criteria and of interest groups. The subjective approach consists of focusing on the testimonies of the various interest groups affected by the intervention being examined, without necessarily making any quantitative measurements. Between these two poles are a large range of

compromises which have been applied in particular sectors (agriculture, health, infrastructure).

He argues that the form of impact assessment to be adopted depends on who is the user of impact assessment, and the purpose for which they require it. Both formal and informal methods have a place; there is a case for having both 'treatment' (i.e., those who have received a new technology, for example information) and 'control' groups (those who have not). He defines a number of methodologies (formal (starting from cost-benefit analysis) and informal, as well as hybrid), discusses which methodology to use when, gives criteria for choice, concluding that most methods are applicable in most sectors, but with differences in emphasis, and reviews the relevant development economics literature. He concludes that wherever possible a combination of formal and informal should be used, the latter being most useful in small, localised projects. Informal discussion can also help to set the parameters of later, more formal assessment, and answer questions relating to the 'pathways' of impact. His select, annotated bibliography covers orthodox textbooks and articles, reflections on particular aspects of impact assessment methodology, and impact assessment for particular sectors, including agricultural development.

Barrow, talking mainly about EIA and SIA, but with some relevance to general impact assessment, emphasises that if impact assessment is to become an integral part of planning it must be applied before development decisions are made. He notes that a large portion of the literature consists of retrospective impact assessments, but these are considered to be still of value because they can help clarify problems and add to hindsight knowledge. Cost-benefit analysis is also Barrow's starting point; he also mentions cost-effectiveness analysis and logical framework analysis, the latter now featuring throughout the development community, both donor and NGO. He defines SIA as seeking to assess whether a proposed development alters quality of life and sense of well-being, and how well communities adapt to change. There are some features of this approach which have relevance in the context of providing access to information, particularly the more qualitative aspects.

Because of the important role of information management in agricultural research, it is appropriate to look at the international agricultural research system for some pointers to approaches and methodology. The Consultative Group on International Agricultural Research (CGIAR) have introduced impact assessment

as a routine activity, promoted formally by an Impact Assessment and Evaluation Group (IAEG), created in 1995. The group produced a pilot system-wide report in 1997, and a second annual report in 1998. A rigorous study is under way of the impact of its crop germplasm improvement programme on food production, and IPGRI has appointed an Impact Evaluation and Assessment Specialist. Often, the need is felt to measure the impact of a particular initiative or programme; as in the case of IFPRI's 2020 Vision initiative (Paarlberg, 1999). The measurement approach used for the latter is designed around the multiple intent and multi-phased nature of the 2020 Vision initiative itself, and impact is studied by audience group and then by the intended activities of these audience groups.

The audience groups have included researchers and educators, policy leaders outside the developing world, policy leaders inside the developing world (including NGOs), and activities have included publications, workshops, conferences and presentations, and establishment of sub-regional networks. There would appear to be similarities between this and the CTA scenario.

Jock Anderson of the World Bank, who has been an important player in the development of the CGIAR approach, presented an insightful paper to the CGIAR's International Centers Week in 1997, which dealt with many issues which have parallels in the information arena. (Anderson, 1997). He discusses the increasing demand for documenting the impact of investments in agricultural research, ranging from accountability imperatives, through needs to underpin the political support for such continued investment, to donor-driven requirements. He takes a constructive approach, by observing the processes around the research 'project cycle' - in their input absorption, their nature and style, and output performance - as a prelude to assessing the extent of impact, and to deciding what it may mean in a nominated context, such as injunction for sustainable poverty reduction. He also talks specifically about 'knowledge' aspects of the assessment of research, and specifically underlines the difficulties of finding methodologies to measure them, suggesting that their resolution should be left to 'those possessing either the bibliometric inclination or the scientific perspicacity to judge how such contributions might usefully be measured'. Anderson also contributed significantly to the ECART/ASARECA/CTA workshop held in Uganda in 1999 [CTA, 1999, *op. cit.*]. The German agency, GTZ, introduced their approach at the same workshop.

We also have to consider issues of presentation, i. e., developing a user-friendly

approach, and handbooks such as that developed by Oxfam as a basic guide to evaluations for development workers meets criteria regarding simplicity and presentation, while not ducking the issues (Rubin, 1995). This is especially important when dealing with grassroots organisations and those for whom such procedures are unlikely to become routine.

Development economics, EIA and SIA, and especially the methodology adopted by the CGIAR, applied in various situations (infrastructure, agriculture, transport, health, education), and the work of NGO agencies such as Oxfam may offer some useful and appropriate approaches and methodologies, and some pointers to presentation. However, we have to look at the literature of information science, and the experience of projects in the information management field (especially in the development context) before drawing any conclusions as to the most appropriate methodologies.

Impact assessment in information science

There is a wide literature relating to the economics of information, including value, impact and measurement, both in library and information science and in business, but the area was regarded until recently as a 'neglected area and under researched subject', certainly in the UK, giving rise to a volume based on eight British Library Information Policy Briefings (Feeney and Grieves (eds) 1994a) which includes studies, both national and international, on the value of information, including impact, productivity, economics, and measurement.

A particularly useful chapter in Feeney and Grieves is one on 'The value of information' (Badenoch et al, pp. 9-77). It reviews the growing and complex literature in this field, much of which uses economic or econometric analytical techniques, and draws some potentially useful conclusions in the search for appropriate methodologies. The caveat is that many of the applications are in the developed world, and relate to more 'conventional' information and library environments.

These examples indicate the growth of the body of literature relating to the impact, value and cost-benefit of information provision in the North, perhaps

because of the tighter funding environment that faces most libraries and information services, and because of choices which have to be made among (expensive) technologies. However, it is recognised that 'the value of information' literature relating to the South is still relatively scarce, in spite of the crying need to be able to demonstrate satisfactorily, as with any development project, to both providers (donors) and beneficiaries, the return on investment in information projects.

Impact studies in 'information for development'

Canada's International Development Centre (IDRC) has undoubtedly been the pioneer and driving force in stimulating both research and action (cf Menou (ed), 1993, Horton, 1994, McConnell, 1995, 1999), in a programme which has been evolving since 1992. At a workshop in Nairobi in 1993 a framework for impact assessment and a methodology suitable for field testing were drafted. UNESCO has also done important work (Correa et al, 1997, discussed in more detail below). Now that information technology and knowledge management have become central pivots of the development strategy of many donors (cf. World Bank, DFID, DANIDA) one can expect there to be a spate of evaluation and impact studies as projects are implemented and come up for review. A recent draft report from DANIDA indicates this growing awareness of the need to apply more rigorous assessment to information projects (Rasmussen (draft) 1999). CIDA has also started a process of establishing a framework for evaluating the performance of ICTs (Young et al, 1997). IDRC has recently published a comprehensive guide to evaluation for use with its telecentre projects in Africa (Whyte, 2000) - this is further discussed later in the paper. CTA has been one of the major players in the ACP countries and, as indicated in the introduction, is concerned to measure the impact of key parts of its programme before undertaking new projects. Surprisingly, perhaps, FAO has no track record in developing or applying impact evaluation techniques with regard to its information activities, but this can be expected to change following its June 2000 conference First Consultation on Agricultural Information Management (COAIM), at which it hosted a CTA-managed workshop on impact assessment, and the conference itself endorsed the need for such activities.

The most comprehensive (and most widely quoted) study to date of impact

assessment in the field of information for development (Menou, *op cit.*), reports on a computer conference among practitioners which succeeded the Nairobi workshop mentioned above. This does not define impact assessment as a discipline, but concentrates rather on the need for it with regard to provision of information services in developing countries, and on appropriate methodologies, and, together with a conference paper delivered just before the final report was published (In: Feeney and Grieves, eds, 1994b) these provide some useful checklists for anyone designing impact studies, for example, types of impact:

- _ Those that are both measurable and quantifiable, such as cost and time savings
- _ Those that are measurable but not quantifiable, such as increased quality
- _ Those that are neither measurable not quantifiable, such as new insights, learning , etc.

In selecting and organising indicators, one should ensure that:

- _ Data collection and analysis is as easy and simple as possible
- _ Interpretation of indicators is straightforward
- _ Indicators point to benefits which are recognised by the constituencies concerned
- _ Resulting conclusions are intelligible, if not appealing, to those who are going to act upon them

Much emphasis is placed on the fact that the assessment cannot be a self-contained, isolated and one-time exercise, but an ongoing process, built into project formulation, not added as an afterthought, and should be beneficiary/user driven. Five main categories of potential audiences were identified among the many different groups that could potentially be interested in the results of an impact assessment exercise:

- _ Decision makers
- _ Information managers
- _ Information and information system users
- _ The community at large
- _ Donors or funding agencies in general

Some prerequisites to be met before undertaking an exercise are listed:

- _ Define user community
- _ Define development issue(s) and/or programme(s) to which the relevant information activity(ies) or project(s) are contributing
- _ Set up standard guidelines for collecting, analysing, interpreting and presenting anecdotes and other data
- _ Identify the main patterns of operation of the global information life cycle and the factors which influence its effectiveness for the user community and issue under consideration
- _ Describe the Information Use Environments (IUEs) of the selected user community(ies)
- _ Assemble baseline data

One then has to work with representatives of the beneficiary groups (decision makers and end users) to determine the perceived and/or expected benefits of information activities and products, and to identify the factors to be included in the framework, and by what steps. Menou draws on the work of others (e.g., Griffiths and King, 1993) to derive the tentative structure of a model for the assessment of the impact of information. Further discussion focuses on how the guidelines thus developed, the 'Preliminary Framework', were to be tested in the field. The four-stage Framework is already being regarded as one of the benchmarks for future work, and was used in the case studies reported in this paper, so it is worth reproducing it here: (see Parker, 1999, McConnell 1999, Horton, 2000).

Preparatory Steps (training team members, defining the user community, etc.)
Planning and Design (identifying objectives, critical factors, indicators, etc.)
Monitoring and Measuring (data gathering, calculating indicators, etc.)
Communicating the Results (presenting findings to target audience)

The development and application of indicators - identifiable qualitative and quantitative measures - is an important aspect of the application of the Preliminary Framework, which identifies and describes five types of indicator:

- _ Performance Indicators - relating inputs to outputs

- _ Effectiveness Indicators - relating outputs to use
- _ Cost-Effectiveness Indicators - relating inputs to use
- _ Cost-Benefit Indicators - relating inputs to outcomes
- _ Impact Indicators - relating use to outcomes

The way in which this is being applied is described under 'Case Studies' below, and specific examples are reviewed in Appendix II. Menou recurs as the most prolific of contemporary authors and speakers in this field, in the published literature, conference papers, other authors' citations, and consultancy reports.

The growing interest in the impact of ICTs in developing countries is also giving rise to a new literature, although it can often only be found in commissioned reports, conference papers, and discussion groups on the Internet. Some of these are also mentioned.

An important report prepared by IFLA for UNESCO (Correa *et al*, 1997) is a retrospective evaluation, arising out a seminar held in Botswana in 1995, of UNESCO's 20 years' experience of implementing projects for the advancement of provision of information to rural communities in developing countries. It suggests ways in which the performance and impact of rural resource centres might be measured. Qualitative and quantitative standards are developed, together with technical guidelines and performance measures of all sorts of rural library and information services. The report has the virtue of being based on real case studies, and its bibliography also documents these, many of the citations coming from authors based in developing countries. Its methodology may have particular relevance in implementing CTA's strategy for devolved services, and has the virtue of being based almost entirely on developing country experiences and perceptions. It is case studies, rather than theory, which provide pointers to a blueprint for impact assessment of information projects, and there are further examples of these in the report on a 1995 IDRC workshop (McConnell, *op cit*). Both the UNESCO report and McConnell have valuable bibliographies, and in the latter this comprises a review of the 'information impact' literature 1993-1995, i.e., post-Menou, 1993 (Chataway and Cooke, 1995).

Whyte's recent handbook for IDRC (Whyte 2000, *op. cit.*), designed for use in evaluating telecentres, may prove to be a benchmark. Her guidelines identify the key questions facing the research and evaluation team, propose alternative solutions and best practices based on experience from similar field situations, and facilitate comparability of pilot project by providing a common reference and

starting point. Its chapter headings could be used in other such manuals.

- Rationale for having guidelines
- Importance of an evaluation plan
- Indicators
- Data collection , especially decisions on sampling methods and techniques
- Research methods and techniques
- Stages of data analysis and reporting

CTA itself recognised the need to understand the process involved in impact assessment and its potential for application to its own activities, and convened a workshop for its own staff and selected ACP NARS managers in January 1998, with lead papers by Menou and van de Putte, and two case studies (CTA, 1998).

One of the objectives was to facilitate the development of practical and cost-effective approaches for assessing the impact of information and communication management on institutional development in NARs in ACP countries. A major recommendation of the workshop was that CTA should pursue this goal by carrying out pilot studies in collaboration with suitable ACP organisations.

CAB International (CABI) and CTA have both undertaken evaluation and impact studies of services and projects; these are discussed in more detail below.

Case studies (see also Appendix II)

While there is a burgeoning literature on theory and methodology, it is more difficult to find examples of impact studies in real situations or applied to real projects. There are some examples of post-hoc evaluations, but few of impact studies, and even fewer where the methodology and process have been set up in advance.

Reference has already been made to studies undertaken by CABI and CTA to evaluate their own information delivery projects. These were essentially evaluation rather than impact studies, designed to improve the services rather than specifically measure impact. CTA has commissioned studies of its CD-ROM

programmes (Broadbent, for CTA, 1994) and of the SDI service (Wangati, 1995), the latter was also discussed at a workshop in December 1994 (CTA, 1994). In 1997 CTA commissioned an evaluation of its publications distribution service (CTA, 1997) which included some elements of impact assessment, and in 1999 of its SDI service (CTA, 1999). Most recently, CTA has set in train a series of 'pilot studies' of projects in ACP countries relating to information products and services, for example some work among Papua New Guinea cocoa farmers, and a study in Trinidad on the impact of information and communication to NAMDEVCo's clientele through its newsletter and a Hot Pepper Seminar (Gangapersad, 2000).

CABI has done evaluation studies of its CD-ROM sponsorship programme in China and several African countries (Gooch et al, 1995, Zhang et al, 1996), using teams comprising both CABI and external personnel; a study of the impact in six South East Asian countries of its Crop Protection Compendium distributed through an ADB (Asian Development Bank) project, and an impact study of its Partnership Facility programme, through which projects in the fields of both bioscience and information in developing countries are funded (CABI, 1996).

McConnell's original report (McConnell, 1995, op cit.) complements the IDRC work reported by Menou. This document first reproduces the proposed methodology outlined by Menou, and then reports a series of case studies using this methodology. Of particular interest to those concerned with rural or agricultural information are a study of ICRISAT's SATCRIS service (Haravu and Rajan, 1995) one about provision of community level information in Africa (Mchombu, 1995), and a report of an impact study of the IDRC-sponsored CABECA project (Hafkin and Menon, 1995) which is particularly strong on methodology.

McConnell, along with Menou and Boissiere, has more recently been involved in an IDRC-commissioned study contracted to FID to examine the impact of information on decision making, in relation to eight IDRC projects in seven countries (Archer, 1998, Parker, 1999, McConnell, 1999). This study applies and crystallises much of the work already done, and applies the Preliminary Framework. It has made use of two Listservers for the duration of the project to facilitate international exchange of information. A special issue of the *FID Bulletin* is being dedicated to the project. The results of this and the conclusions of a workshop convened by FID in December 1999 to discuss the findings prior

to publication have now been published (Horton, 2000). The case studies themselves are summarised in Appendix II.

Future studies using Whyte's guidelines for telecentres will bring a whole new body of relevant experience and literature into the field.

The examples described in Appendix II give just a flavour of what is going on currently in developing impact evaluation studies in the information field, and focus particularly on those concerned with agricultural and rural information. We can probably all identify with at least one of the case study scenarios, have perhaps been directly involved in one or more of the projects being studied or in the assessment exercises themselves, and can undoubtedly derive many lessons from them. There are also some common threads, the most important one being the need for a flexible but rigorous methodology, a simple and flexible framework and some meaningful indicators. These must be sufficiently user-friendly so as not to intimidate the inexperienced and to ensure that wherever possible some IA process is built into projects as early as possible in their life. There are constraints at two levels: first, the nature of the service or activity to be assessed, and secondly, in terms of resources. Our methodology and approach should attempt to address both of these, as well as issues such as time frame, objectives, and focus. Ultimately, a methodology or framework is required which we can all 'own' and feel comfortable and confident in its use .

Conclusions

This selective review of the literature of evaluation and impact of impact - theory, issues, methodology and practice - from a range of disciplines and some illustrative case studies, clearly indicate that there is still a great need for those engaged in information for development projects and programmes to draw on disciplines other than information science, and to pool their knowledge and resources to devise a blueprint that can be adapted for each situation.

It is significant that from several disciplinary approaches very similar messages emerge, indicating desirable and essential prerequisites for an impact assessment study to have value and deliver usable, credible and useful information which can

form a basis for future action.

- Assessment should be carried out by an external body or individual
- Assessment, along with routine monitoring and evaluation, should be built in to the project from the beginning, not conducted *post hoc*
- Both managers and direct beneficiaries should be involved in the process
- Both formal (objective, rigorous) and informal (subjective, anecdotal) methodologies are appropriate
- Appropriate indicators must be agreed
- Data collection procedures must be agreed
- A reasonable time frame must be covered
- Results should be built in to the next stage of a project

While the track record of impact assessment of information projects, programmes and activities could until relatively recently be regarded as both poor and relatively short, especially in relation to developing countries, there is now some pioneering work to draw on, and we can start to develop a framework. We can use, for example, the Entebbe agricultural research workshop results, the outcome of the UNESCO and IDRC studies, the IDRC telecentre guidelines and any work we may have done in our own institutions.

In terms of user-friendliness, we may be looking at the kind of approach adopted by Oxfam. However, the bottom line is that the outcome of an assessment can only be as good as the model used to set it up and the data collection mechanisms put in place for monitoring and evaluation for the duration of a project. The appropriate time frame is also an issue - what is the lag between exposure to new information and evidence that it has 'made a difference', and how does one distinguish between one information source and another in terms of benefits (and costs)? We also have to be able to assess a service or entire programme, and we have to be able to decide whether we should re-invest in the activity or programme.

Above all, the framework chosen must be easy to administer, be acceptable at local level and easily built into local management information systems, with a balance between the desirable criteria and an objective and subjective approach (i.e., there must be local data collection and participation in the process). It must also deliver information that is both usable by and acceptable to all the

stakeholders. We are looking for a user-friendly but comprehensive blueprint, to be tested in the field, and updated as we gain experience and as methodologies are refined.

CTA has begun to develop its approach to evaluation; however, there have been few studies to date, there is no tried and tested blueprint for how such work should be carried out, and the 'impact culture' is only just beginning to develop among its partners, clients and beneficiaries. A start has been made in relation to agricultural research (CTA, 1999, *op. cit.*), and some local projects (c. f., Gangapersad, 2000, *op. cit.*). This may have a trickle-down effect in institutions where evaluation on both research and information is being carried out. Under existing information programmes beneficiaries are increasingly being given choices among information products and services, and there are plans for offering all the present options and new ones as a 'basket', but there is as yet no mechanism for measuring which have been most beneficial and cost-effective. There will be increasing need to set up processes for evaluation studies as CTA responds to new information challenges identified in its expanded mandate for 2001 and beyond. The methodology chosen will have to be easy to administer, acceptable at local level and easily built into local management information systems, with a balance between the desirable criteria and an objective and subjective approach (i.e., there must be local data collection and participation in the process).

There is still some post-hoc work to be done on existing projects and services, but there is also still time to build in to the strategy for 2000 and beyond a workable and sustainable model which will give CTA and its partners the information they need. It may also prove useful in supporting evaluation studies in other organisations and institutions, especially those in ACP and other developing countries.

APPENDIX I

References

- Anderson JR (1997) On grappling with the impact of agricultural research. Background paper for presentation to International Centers Week, Washington DC, 1997.
- Archer R (1998) Report on "Impact of information on decision making". *FID Bulletin* No 48, 51-53.
- Badenoch D, Reid C, Burton P, Gibb, F, Oppenheim C (1994) The value of information. In: Feeney M and Grieves M (eds) (1994) *The value and impact of information*. East Grinstead, UK, Bowker-Saur. (British Library Research Information Policy Issues), pp. 9-77.
- Barrow CJ (1997) Environmental and social impact assessment: an introduction. London, UK, Arnold, Hodder Headline.
- Broadbent KP, Thioune A, Walton P (1994) Increasing access to scientific and technical information in agriculture. An evaluation of the CD-ROM programme. Wageningen, The Netherlands; CTA.
- Casley D and Kumar K (1987) Project monitoring and evaluation in agriculture, a joint study: The World Bank, International Fund for Agricultural Development, Food and Agricultural Organization of the United Nations. Baltimore, USA; Johns Hopkins University Press.
- CTA (1994) Selective dissemination of information (SD) evaluation forum, Pointe aux Cannoniers - Mauritius, 5-9 December 1994. Summary report. Wageningen, The Netherlands and Redit, Mauritius, CTA, Food and Agricultural Research Council and Ministry of Agriculture and Natural Resources.
- CTA (1998) Assessing the impact of information and communication management on institutional performance. Proceedings of a CTA workshop, Wageningen, The Netherlands, 27-29 January 1998.
- CTA (1999) ECART/ASARECA/CTA Workshop on Impact Assessment of Agricultural Research in Eastern and Central Africa. Entebbe, Uganda, 16-19 November 1999. Draft of 2.12.99.
- Chataway B and Cooke A (1995) Measuring the impact of information on development: related literature 1993-1995. In: McConnell P (1995) *Making a difference. Measuring the impact of information on development. Proceedings of a workshop held in Ottawa, Canada, 10-12 July 1995*. Ottawa, Canada; International Development Research Centre.

Correa AF, Ndiaye D, Mchombu KJ, Rodriguez GM, Rosenberg, D, Yapa, NU. (1997) Rural information provision in developing countries - measuring performance and impact.). Paris, France, UNESCO General Information Programme and UNSIST (prepared for UNESCO on behalf of IFLA). (CII-97/WS/11).

Feeney M and Grieves M. (eds) (1994a) The value and impact of information. East Grinstead, UK; Bowker-Saur. (British Library Research Information Policy Issues).

Feeney M and Grieves M (eds) (1994b) Changing information technologies; research challenges in the economics of information. The Third International Information Research Conference, Centre de Télécommunications, Poigny la Forêt, Rambouillet, France, 11-13 July 1993. East Grinstead, UK; Bowker-Saur. (British Library Research).

Forss, K (1999) Questions and Methods in Impact Assessment; Outline of an analytical framework to be used in a pilot study of Impact from Information and Communication. A Study Commissioned by the CTA.

Forss, K (1999) A practical approach to the development of indicators for performance management (follow-up to above).

Gangapersad G. (2000) Pilot Study for 'Assessing the impact of information and communication to NAMDEVCO's clientele through its newsletter and a Hot Pepper Seminar'. Port of Spain, Trinidad, National Agricultural Marketing and Development Corporation for CTA.

Gooch P, Kebede G and Woolley L (1995) Evaluating the impact of CR-ROM databases on agricultural development in Africa. *Information Development* 11(4) 211-220.

Griffiths JM and King DW (1993) Special libraries: increasing the information edge. Washington, D. C., USA; Special Libraries Association.

Hafkin N and Menou MJ (1995) Impact of electronic communication in Africa. In: McConnell P (1995) *Making a difference. Measuring the impact of information on development. Proceedings of a workshop held in Ottawa, Canada, 10-12 July 1995.* Ottawa, Canada; International Development Research Centre.

Haravu J and Rajan TN (1995) Impact of the Semi-Arid Tropical Crops Information Service (SATCRIS) at ICRISAT. In: McConnell P (1995) *Making a difference. Measuring the impact of information on development. Proceedings of a workshop held in Ottawa, Canada, 10-12 July 1995.* Ottawa, Canada; International Development Research Centre. also on <http://www.idrc.ca/books/focus/783>.

Horton FW, Jr. (1994) Analyzing benefits and costs: a guide for information managers. Ottawa, Canada, International Development Research Centre.

Horton FW, Jr. (ed) (2000) Defining and assessing the impact of information on development.

Building research and action agendas. The Hague, Netherlands; FID. *FID Occasional Paper No. 16*. Work carried out with the aid of a grant from IDRC. Select bibliography on pp. 127-132.

International Book Development Ltd. for CTA (1997) Evaluation of the Publications Distribution Service.

McConnell P (1995) Making a difference. Measuring the impact of information on development. Proceedings of a workshop held in Ottawa, Canada, 10-12 July 1995. Ottawa, Canada; International Development Research Centre. also on <http://www.idrc.ca/books/focus/783>.

McConnell P (1999) Building on IDRC's research program on 'assessing the impact of information on decision-making'. A metasyntesis. Report prepared for FID. Ottawa, Canada.

Mchombu K (1995) Impact of information on rural development: background, methodology, and progress. In: McConnell P (1995) *Making a difference. Measuring the impact of information on development. Proceedings of a workshop held in Ottawa, Canada, 10-12 July 1995*. Ottawa, Canada; International Development Research Centre.

Menou MJ (ed) (1993) Measuring the impact of information on development. Ottawa, Canada, International Development Research Centre.

Menou MJ (1993) The impact of information on development: results of a preliminary investigation. In: Feeney M and Grieves M (eds) (1994) *Changing information technologies; research challenges in the economics of information*. The Third International Information Research Conference, Centre de Télécommunications, Poigny la Forêt, Rambouillet, France, 11-13 July 1993. East Grinstead, UK, Bowker-Saur. (British Library Research), pp. 123-155.

Mosley P. (1997) A simple guide to impact assessment for economists. *Discussion Papers in Agricultural Economics*, University of Reading, No. 33.

Paarlberg D (1999) External impact assessment of IFPRI's 2020 Vision for Food, Agriculture and the Environment initiative. *Impact Assessment Discussion Paper No 10*, International Food Policy Research Institute, Washington, D. C., USA.

Parker, S (1999) Knowledge is like light - Information is like water. Paper presented to EADI Information Group September 1999.

Rasmussen AM (1999) Danida Information and Development Policies. Copenhagen, Denmark; Danida (draft).

Rubin F. (1995) A basic guide to evaluation for development workers. Oxford, UK; Oxfam.

Wangati FJ (1995) Selective dissemination of information (SDI). Review of CTA/SDI Project. Synthesis Report. Wageningen, The Netherlands; CTA.

Whyte, A. (2000) *Assessing community telecentres: guidelines for researchers*. Ottawa, Canada; International Development Research Centre. Also on <http://idrc.ca/books/focus/916/01>. Useful bibliography.

Young V et al. (1997) *ICTs and development: testing a framework for evaluation*. Ottawa, Canada; Canadian International Development Agency. <http://www.acdi-cida.gc.ca/cida>.

Zhang Q, Miao Zhouan and Tai Weidong (1996) Upgrading agricultural information services in China: the impact of CD-ROM. *Information Development* 12(2) 75-89.

APPENDIX II

Case studies

To assist in arriving at a standard and user-friendly methodology or framework, it is helpful to look at examples of attempts to apply IA to information projects, in terms of methodology, framework, and pitfalls, lessons. Some very clear lessons emerge which can provide pointers and guidelines for future work. They can also be used to build up a methodology which is workable, delivers the information we need, and which can be introduced painlessly in a variety of working environments. Two examples are selected, a series of IDRC projects, and one CTA study.

1) IDRC

Seven cases studies carried out for FID under the IDRC funded Impact Research Program are summarised below, based on Paul McConnell's August 1999 'Metasynthesis'. (Horton, 2000). All the case studies set out to apply the Preliminary Framework (PF) developed by Menou and others in the mid-1990s, and reviewed in the main part of the paper.

Notes:

- These were all post-hoc studies, rather than the methodology being applied from the outset of the project.
- In three cases (ALIDE, CARICOM and ISER) a modified and more manageable version, the 'Indicator Method' was developed which focuses primarily on the Impact Indicators.

The boxes summarise each of the projects, in terms of:

- Brief summary of project
- Aims and objectives
- Findings from testing the methodologies
- Compliance with the PF
- Indicators and impact
- Lessons learned

ALIDE: 'Assessing the Impact of Information and Telecommunications on Policy Formation (Latin America)'

Coordinated by: ALIDE (the Association of Latin American Finance Institutions), Peru, plus six other regional institutions. Multi-country, multi-sector case study that is focused on the impact of information delivery via a specific medium (electronic format).

Period of study: scheduled 2 years, beginning June 1996.

Aim: 'to address questions related to understanding the value added by electronic networking in the provision of info services and the difference which this makes in the utilisation of info for policy formulation.' Method of delivery as well as content became part of the assessment

Results: Benefits reported from electronic communication, and indicators obtained. But most measures were indicators of user satisfaction rather than impact on policy formulation - they described access to info, but not use of info. Results only illustrative; need less ambiguous questionnaire, plus specific (rather than generic) indicators for individual networks.

Compliance with PF: Similar to PF, but a streamlined version - still pursuing qualitative and quantitative assessment, but with fewer surveys, not attempting to analyse all the variables, primary focus on one input (information) and one set of indicators (impact).

Indicators and Impact: Indicator method was carried through to completion, providing quantitative and qualitative assessment. Users very positive, but results still ambiguous - benefits related mainly to satisfaction with electronic channels, rather than to actual information use. Also, to be of value to individual networks, indicators should be tailored, not generic.

Lessons learned: Project too ambitious. Too many variables. Need clearer conceptual distinction between benefits of IT and of info use, and reflect this in questionnaire. Distinguish among beneficiaries.

**CABECA - 'Impact of Electronic Communication on
Development in Africa (UNECA/PADIS**

Coordinated by: the Pan African Development Information System of the UN Economic Commission for Africa, Ethiopia. Multi-country (Ethiopia, Senegal, Uganda, Zambia) and multi-sector case study

Period of Study: scheduled for 2 years (95/96) but extended to 98.

Aim: looking at impact assessment following an earlier project on 'Capacity building for electronic communication in Africa (CABECA)'. To develop measurement indicators and to measure impact of electronic communication on development.

Results: Mixed results. Rapid availability of Internet compromised initial controlled channels. Focus tended to be on the IT, not on impact of use of info. Benefits identified, but did not confirm impact per se. Valuable lessons in exploring conduct of IA. Results used by World Bank and USNAS. Narrower focus and longitudinal approach would have improved likelihood of success.

Compliance with PF: Similar, but not the same as PF. Insufficient resources for all tasks expected of local investigators leading to ad hoc adaptations.

Indicators and Impact: Positive and negative effects of Telecommunications were identified re Connectivity, Information, Action (Operational) and Results, But majority of these focused on attributes of the technology rather than on the consequences of use; nor were impacts translated into specific indicators. Respondents had difficulties with the concepts. More valuable as an exploration into the process, rather than for its actual results.)

Lessons learned: Underestimated workload for local investigators. Population of study too diverse, conditions too complex for use of PF. Needed better training, improved questionnaires, micro-studies, repeated interviews.

**CARICOM - 'Information for Decision Making
in the Caribbean Community (CARICOM)'.**

Coordinated by: Caribbean Community Secretariat, Guyana. Large, multi-country, multi-sector case study

Period of Study: scheduled for 3 years, impact work mainly done in year 3.

Aim: looking at the impact of several regional information services on decision making, research and action. Initially focused on information received from Regional Information Systems, but then broadened to include 'information used in decision making' regardless of source.

Results: Impact project somewhat premature, dwarfed by complexity and problems of overall CARICOM program. Quantitative assessment suggested impact, but insufficient data available. Qualitative assessment confirmed substantial influence of info. Increased use of info reported by decision makers. Case study does confirm feasibility of measuring info impact, providing preconditions are in place - clear focus, proper design and pilot phases, information flow to users, adequate data collection mechanisms, practical training for investigators, and commitment of time/funds/personnel.

Compliance with PF: Similar to PF, but streamlined version, as per ALIDE.

Indicators and Impact: Quantitative assessment indicators proved feasible and suggested moderate impact, but inconclusive - insufficient data for statistical analysis. Qualitative assessment found substantial benefits, but was dependent on subjective views of users, and inclined to focus on satisfaction with services, rather than the consequences of actual use of information.

Lessons learned: Problems of implementation rather than methodology per se. Assumed too high a level of efficiency and delivery of info. Needed reduced complexity, more specific homogeneous user group, early definition of intended benefits/outcomes, time, personnel, training, combination of qualitative and quantitative approaches.

**ISER - 'Assessing the Impact of Information on
Policy Formulation in the Caribbean (UW)'**

Coordinated by: Institute of Social Research, University of the West Indies.

Period of Study: Started Oct 94, extended to Oct 99.

Aim: Case study looks at the impact of a specific ISER database of UWI research results, using primarily electronic distribution medium, for one primary target group of users, senior policy makers in the English speaking Caribbean. Goal is 'to strengthen the links between research, info systems and policy formulation.' Initial focus was impact of UWI database coming from ISER, by electronic means, but later expanded.

Results: Ongoing. More focused than CARICOM study, but still encountered major implementation problems (shortage of info contents, IT changes, workload) that interrupted progress. Preliminary accomplishments included development of user profiles, and identification of benefits and potential indicators. This work guided CARICOM and ALIDE cases studies.

Compliance with PF: Very similar in principle to PF at first, but project interrupted part way through because of weak info flow and heavy workload. Now resumed, with streamlined methodology.

Indicators and Impact: Still in progress (Aug 99). Aiming to find indicators of Impact (relating to user satisfaction and benefits derived) and Effectiveness.

Lessons learned: Difficult to introduce impact work at start-up of new info service. IA suffered because of problems with the new ISR service.

**INFORD - 'Information Provision for Rural Development -
Phase II (Africa)'**

Coordinated: initially by University of Botswana, and then, following the transfer of the project leader, the University of Namibia. Multi-country (Botswana, Malawi, Tanzania), multi-sector case study

Period of study: scheduled for 3 years (1994-97). Final report expected late in 99.

Aim: looking at the impact of local information centres on rural communities. Impact of info, including indigenous knowledge, on various aspects of community development.

Results: People claimed positive changes from using info but tended to focus on immediate benefits rather than the impact of subsequent use over time. Signs of progress with small group of 'innovators/early adopters'. Attempting verification using community data. Experience with Community Information Centres successful enough to encourage expansion/adoption elsewhere.

Compliance with PF: Very similar in principle to PF, though unable to follow through with original plans. Found PF methodology very demanding.

Indicators and Impact: Analysis still in progress (Aug 99). Tracking changes in Health/Nutrition, Educational Performance, Indigenous Knowledge activities and Income Generation (but little source information available on income generation). Anticipating that indicators would be identified, especially with the small group of innovators and early adopters. AS the Rural Information Centre is a complex environment, it is likely that sets of indicators will be required, and tracked over time to verify relationships.

Lessons learned: regional network very complex, encountered communication problems and needed more resources (including better trained local staff). Time and workload underestimated. More focused micro-studies on critical issues, needed. More participatory methods for monitoring impact needed. Need to distinguish between standard user statistics and results of info use.

REDUC - 'Regional Network Serving Policymakers (Latin America)'

Coordinated by: Carleton University, Canada, plus CIDE (Centre for Research and Development in Education), Chile. Multi-country (Mexico and Central America), single sector case study

Period of study: scheduled for 15 months, Short extension.

Aim: looking at the impact of CIDE's education information network (REDUC) on senior policy makers in the information field. To develop two kinds of assessment indicators, effectiveness (outputs/usage) and impact (usage/outcomes). Also looking at skills and info training on abilities/activities of policy analysts, and their subsequent impact on policy formulation.

Results: Inconclusive. Interviews not consistent and therefore not comparable. Some ambiguity concerning primary objectives. Research team sceptical about the concept of IA.

Compliance with PF: Some similarity to PF in principle, but methodology adapted. Still found too demanding. Also experienced local ad hoc changes during implementation.

Indicators and Impact: Anticipated finding indicators of Effectiveness (outputs/usage) and Impact (usage/outcomes). Potential Impact indicator was to be evidence of policy papers being incorporated in new policy formulation (e.g. content analysis). Researchers did not pursue this; felt decision making process too complex to focus on info component.

Lessons learned: More consistency needed in 3 sets of interview, better communication needed at local level. Not enough senior participants. Longer duration required. Training for interviewers. More focused study needed - objectives too diverse.

SATCRIS - 'Regional Networks Serving an International Research Community (ICRISAT, India)'

Coordinated by: ICRISAT. Multi-country (in Asia and Africa), single sector case study

Period of study: Scheduled for one year (95-96) but took longer.

Aim: looking at the impact of the Semi-Arid Tropics Research Information Service (SATCRIS) on the activities of the international research community, users and SAT R&D. Specifically, two services, SDI and Search.

Results: Attempted to evaluate effectiveness of SATCRIS users. Could not make direct links between info and agricultural impact, although scientists believed SATCRIS had been helpful. Concluded that capabilities of users were enhanced, but cannot establish specific achievements.

Compliance with PF: Started off similar to PF, but there were staff changes. New team had some difficulty with concepts, and found PF difficult to complete.

Indicators and Impact: Despite extensive list of potential benefits and indicators suggested at interim stage, these were not pursued later in the project. Some benefits identified, but not converted to indicators; team felt they had insufficient expertise. Benefits tended to focus on user satisfaction and perception of impact, rather than objective measures.

Lessons learned: would have welcomed practical handbook on IA! Needed better combination of questionnaire (for reach) and interviews (for interpretation). Needed constant update of user profiles. Inadequate distinction between impact of SATCRIS and non-SATCRIS data. Need repeat interviews, more consultation with users at design stage, more longitudinal study, more training.

2. CTA

CTA: SDI Impact Study 1999

Coordinated by: CABI/CIRAD, case study of researchers in ACP countries, with interviews in 2 countries (Zambia, Kenya)

Period of study: 1999

Aim: Some 11 years after the inception of CTA's SDI service, to assess the impact/usefulness of (level of satisfaction with) the service, and to assess the impact of the service on agricultural research and development. A broader objective was to use the assessment to inform CTA's future work in this area, and to look for pointers for future methodology. Two methodologies were employed: on a sample of 3 profiles, a questionnaire and interviews were used to elicit views on the service, the use to which the info was put, and effects on research. Bibliometric analysis was used to establish evidence relating to both the authors of the articles cited in the profiles, and the beneficiaries of the service.

Results: Bibliometric analysis limited due to low level of citation of ACP recipients in international databases. Survey had satisfactory rate of response. Both survey and bibliometric study indicated that SDIs were used, how they are used, and some of the benefits. This study predated application of indicators in CTA's IA work.

Lessons learned: Larger profile of users, more longitudinal data would have been beneficial. Study pointed to need to apply framework and more rigorous indicators, for an 'impact culture', and for establishing methodology from inception of project/service.