ARTICLES

HOW NGOS MONITOR PROJECTS FOR IMPACTS: RESULTS OF RECENT RESEARCH[1]

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INTRODUCTION

Many development assistance organizations are addressing the interlinked problems of poverty, underdevelopment, and environmental degradation. In particular, nongovernmental organizations (NGOs) are a dynamic and diverse group of organizations operating at the local, national, and international levels. Their activities encompass relief and humanitarian aid for refugees and displaced persons, economic and rural development programs, natural resources and conservation projects, public health interventions, and many other areas. How NGOs monitor the socioeconomic and environmental impacts of their projects is the subject of this paper.

Funding sources have become more uncertain and erratic in recent years, particularly for aid to developing countries. Of this smaller share, less is

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generally available for the monitoring and evaluation (M & E) of project impacts, often considered to be an administrative expense. Private contributors sometimes insist that their donations be used directly for humanitarian purposes and not for administrative purposes.

Consequently, NGOs are coming under greater pressure to review their use of both official funds and private donations, and to make better use of their resources. It has become a major challenge to many NGOs to allocate their resources in a rational, cost-effective way, while ensuring that beneficial program impacts are maximized.

As development assistance has come under greater scrutiny, increased attention has been given to the *local* impacts of development assistance. The impact of NGO projects on local communities and environments is not well understood, nor are the differential impacts on women, children, landless, and other vulnerable groups. Many NGOs themselves are uncertain of how their projects affect the rural poor (Eckman 1994). Conferees at a recent workshop voiced a concern that the development community does not know enough about what is working, what is not working, and the factors that enable or constrain success in NGO-supported projects (Otto 1993). Nor can the potential for sustainability be inferred from the conventional monitoring indicators used in many development projects (Eckman 1994).[3] In fact, there is still no commonly accepted protocol among practitioners in defining *impact*, no common methodology for measuring whatever it is, and lack of consensus over interpretation (Jiggins 1995).

Even well-planned projects can have unintentional negative impacts on participants, local communities, or the environment that are often undetected until their magnitude becomes severe. There are many reasons why development projects do not succeed or, worse, have unintended negative impacts on people and the resources on which they depend. One reason for concern is that donors sometimes do not adequately monitor either socioeconomic or environmental impacts. A 1989 study found that few of the projects surveyed evaluated the socioeconomic impacts which are considered central in conventional rural development impact studies (Scherr and Müller 1991). A World Bank study indicated that 27 of 34 projects collected no qualitative data

[3] One new approach to anticipating negative impacts arising at the project level is *precautionary monitoring*, which is based upon indicators of unsustainability and community-defined early warning signs (see Eckman 1994 and forthcoming (a)).

whatever (Doolette and McGrath 1990). Lemons and Porter (1992) report that only about one-half (55 percent) of impact assessment practitioners monitor for social impacts in development projects.

Empirical evidence, past research, and the development literature (Chambers 1983; Easter 1986; Salmen 1987; Uphoff 1990; Dalal-Clayton 1992; Eckman 1994) suggest that conventional NGO monitoring, evaluation, and impact assessment tools are inadequate for addressing such complex processes as changes in socioeconomic well-being, the adoption and diffusion of introduced technologies, local participation, or the environmental impacts of aid. There is a growing consensus that considerable benefit could result by directing some portion of aid funding toward new tools and methods of development assistance, the measurement of impact, and improved, more sensitive methods for assessment, monitoring, and evaluation (Myers 1988; Uphoff 1990; Eckman 1993; Otto 1993; Eckman 1994).

THE RESEARCH

How then do NGOs assess development projects for environmental and socioeconomic impacts'? What monitoring gaps, needs, and problems are expressed by NGOs? To what degree are local participants involved in the monitoring and evaluation process? What positive steps can development organizations take to improve their monitoring efforts?

No previous studies devoted specifically to NGO monitoring practices were uncovered in an extensive literature review conducted in 1991–92, although a few prior studies on technology impact assessment and evaluation practices were found (Scherr and Muller 1989, 1991; Lemons and Porter 1992). In a review of the literature of NGO assessment, monitoring, and evaluation materials, Eckman (1994) found that few studies covered *how* NGOs monitor in term of field-level methods and practices, *what* information is collected, *how often* monitoring takes place, or *who* has primary responsibility for different monitoring tasks, including decision making. Nor has there been much research on the distribution of impacts in highly participatory projects, despite the emphasis donors have given to local participation.

Research Methods

The research objective was to describe current monitoring and evaluation practices, and to identify gaps and needs so that practical measures might be

developed to improve the quality of monitoring. The research is characterized as a *purposive* study in that it is not based upon a randomized, statistically rigorous sample that can be generalized to a larger population (Babbie 1975). The study is *exploratory and inductive* in that prior research, data, and theories and models on the subject are incomplete. The study is further characterized as *applied* in that it is intended to support the development of practical, operational tools and techniques for use within the population of interest. Research activities were carried out from 1991 to 1994.

The research design included three research tools: a mailed quantitative survey[4] of NGOs worldwide, a qualitative content analysis of monitoring materials provided by NGOs participating in the survey, and follow-up interviews with dozens of NGO staff. Quantitative methods were coupled with qualitative methods to obtain a more complete picture of conventional monitoring practices, and as a validity check to balance deficiencies found in any one method.

The Sample

The basic unit of analysis in this study is the *organization*, rather than the development project or organizational personnel.[5] Whereas individual staff members completed the questionnaires about project monitoring practices, the focus here is on institutional practices; hence organizations rather than projects are the subject of the study. The population of interest includes all international- and national-level, nongovernmental relief and development organizations that implement field-level programs and projects.

Hoekstra (1987) notes that the drawing of a random probability sample from the anticipated domain area will often prove to be impossible because of the lack of a sampling frame. In this instance, no previous study or sampling frame could be identified for the population of interest. In such circumstances, probability sampling is not recommended unless a special project has been developed for that purpose, as no statistical conclusions can be drawn with regard to the population.

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[4] Copies of the questionnaire may be obtained in English, French, or Spanish from the author.

[5] Previous studies (e.g., Scherr and Müller 1989 and 1991) sampled development *projects*, not development *organizations*, as the basic unit of analysis.

A list of development organizations was therefore compiled from databases provided by the World Bank, World Wildlife Fund, and others. Criteria for inclusion were that the organization be nongovernmental and that it implement at least one project in a developing country. No attempt was made to chose only those organizations with successful projects or monitoring systems, as it was felt that determining "success" would be highly subjective. To ensure that the organization's staff member completing the questionnaire be familiar with the M & E system of the organization, we attempted to identify and target field-level staff or those otherwise closely associated with the organization's field practices.

Production and administration of the survey was generally guided by the method described by Dillman (1978), including follow-up mailings, faxes, and telephone calls to counter nonresponse bias. The questionnaire was reviewed by at least 15 colleagues at the University of Minnesota, and pretested with four development professionals, each associated with a field project.

The sample included 172 development assistance organizations worldwide; a total of 92 responded (53 percent). The sample comprised organizations of varying size, structure, purpose, and resources. Although NGOs were the primary focus of this study (approximately 90 percent of total respondents), several other agencies (research and policy institutes, United Nations organizations, national or regional associations, and other organizations) also responded to the survey. Government-affiliated organizations such as the United States Agency for International Development (USAID) or international lenders (such as the World Bank) were not included in the survey. For purposes of analysis, a typology was prepared which divided the organizations into mutually exclusive categories, based upon a typology used by World Resources Institute (WRI 1992).

The sample included 75 NGOs (both international and national); seven United Nations organizations; six policy, research, or educational institutes; and four in the "other" category. Geographic distribution of respondent organizations are **42** percent in Africa; 14 percent Asian; *2* percent from Latin America"; 39 percent Europe or North America; and 3 percent other.

[6] The response rate for Spanish language questionnaires was very low (13 percent), which corresponds with the low response **rates** noted in other NGO surveys.

Respondents reported a wide programmatic scope including agriculture and natural resources projects, humanitarian and refugee relief, food and nutrition programs, public health, education and training, lending or credit, and technology development.

Survey Results

This section briefly summarizes the survey results. This paper will summarize survey results only for respondent NGOs and United Nations (UN) organizations, and will not generally include results for institutes or respondents in the "other" category. For more detailed information on the survey findings see Eckman (1994).

Organizational support for monitoring

Gregersen and Lundgren (1989) note that effective monitoring requires adequate organizational support in the form of resources, knowledge, and information. The survey first attempted to understand the current degree of organizational support for project monitoring by reviewing institutional support provided by NGOs such as training, written guidelines and manuals, and specialized M & E units or staff members. It was discovered that 25 percent of organizations use written monitoring and evaluation guidelines and standards, and that 38 percent provide staff with a monitoring and evaluation manual. On average, 57 percent have a monitoring and evaluation unit and/or officer. However, larger UN organizations were more than twice as likely (86 percent) than NGOs (33 percent) to provide such support to staff for monitoring and evaluation.

Training is another means by which organizations support monitoring and evaluation. Survey findings show that the 45 percent of the respondents provide training in M & E during orientation for new staff and 14 percent provide additional inservice training more than once per year. Only 3 percent provide follow-up training after three years. One-fourth (24 percent) provide no training whatever in monitoring and evaluation. UN organizations on average provided more frequent inservice training (14 percent) than did NGOs (7 percent).

Data collection methods used in monitoring

A multiple-choice, check-all-that-apply question focused on *data collection methods* preferred by development organizations. The following percentages are for **all** types of development organizations.

- Informal field methods: 72 percent
- Formal field methods: 57 percent
- Key informants: *52* percent
- Observation of behavior: 51 percent
- Trend analysis: 45 percent
- Group interviews: 41 percent
- Case studies: 38 percent
- Visual records: 31 percent
- Panel studies: 28 percent
- Mapping: 20 percent

Informal field studies, mapping, and observation were preferred by NGOs, while the use of key informants and case studies were strongly preferred by UN agencies. Such methods were reported to be used in combination with other methods, including economic or financial analysis and participatory methods (see below).

Frequency of monitoring

One multiple-choice, check-all-that-apply question was asked about *how often socioeconomic information is collected* when monitoring a typical project.

- During a baseline survey: NGOs, *52* percent; UN agencies, 86 percent
- Weekly: NGOs, 2 percent; UN agencies, none
- Every few weeks: NGOs, fewer than *3* percent; UN agencies, none
- Monthly: NGOs, 7 percent; UN agencies, 14 percent
- Every 1–3 months: NGOs, 2 percent; UN agencies, 14 percent
- Every 3–6 months: NGOs, 28 percent; UN agencies, 71 percent
- During end-of-project evaluation or survey: NGOs, 45 percent; UN agencies, 71 percent

Use of participatory methods

There are frequent calls in the development literature for increased use of participatory approaches and methods when planning and implementing development projects. A multiple-choice, check-all-that-apply question was posed to learn about *current levels of use of participatory methods by respondents.*

Use of participatory methods varies by type of organization. Among UN agencies, participatory evaluation was the most commonly preferred method (71 percent), followed by the participatory assessment, monitoring, and

evaluation (PAME) methodology[7] (51 percent), participatory action research (51 percent), diagnosis and design (51 percent), participatory rural appraisal (43 percent), and other (14 percent). Among NGOs, participatory evaluation was on average the most frequently noted method (48 percent), followed by participatory rural appraisal (44 percent), diagnosis and design[8] (28 percent), PAME (27 percent), participatory action research (24 percent), constructive participation[9] (20 percent), other social action research methods (6 percent), and social learning theory[10] (5 percent).

Economic analysis methods

Economic analysis methods were used by fewer than half of the organizations surveyed: 47 percent of NGOs, compared with 43 percent of UN organizations. On the other hand, 57 percent of NGOs reported using cost-benefit analysis, compared with 43 percent of UN organizations. However, 45 percent of NGOs indicated that they use financial accounting procedures in their projects, compared with 71 percent of UN respondents.

Despite increased calls for cost-effective measures and more rational use of financial resources, the data suggest that there is additional scope for improvement in the use of economic and financial methods. While such methods cannot assure the sustainability of project initiatives, they may help to pinpoint underlying economic trends, and help project staff to track project resources. In more participatory, bottom-up projects, there appears to be scope for better tracking of local prices and for monitoring seasonality in terms of cost and availability of key inputs (labor, foodstuffs, minor forest products, fuelwood, water, etc.) at the local level.

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[7] Participatory assessment, monitoring, and evaluation (PAME) was developed by the Food and Agriculture Organization of the United Nations (FAO), and described in FAO 1989 and 1990.

[8] Described by Raintree (1987)

[9] Described by Bunch 1982

[10] Described by Korten and Klauss (1984)

Information about local participation collected during monitoring

The survey attempted to learn *what information is monitored/collected about the local participants* in projects supported by the respondents.

Gender of participants: NGOs, 66 percent; UN agencies, 86 percent
Attendance at project functions: NGOs, 62 percent; UN agencies, 71 percent
Type of work done by each participant: NGOs, 52 percent; UN agencies, 27 percent
Income or benefits gained by individual participants: NGOs, 45 percent; UN agencies, 86 percent
Age of participants: NGOs, 41 percent; UN agencies, 71 percent
Costs to participants that are associated with project participation: NGOs, 31 percent; UN agencies, 86 percent
Amount of work or number of hours contributed by individual participants: NGOs and UN agencies, 27 percent.

Information about self-reliance collected during monitoring

Related to local participation is the degree to which participation in the project contributes to community self-reliance and empowerment. Respondent organizations monitored *local participation and self-reliance* variously:

- The degree of community control over local resources and decisions: NGOs, 62 percent; UN agencies, 57 percent
- The degree of political participation at the local level: NGOs, 25 percent; UN agencies, 29 percent
- Emerging patterns of leadership: NGOs, 38 percent: UN agencies, 71 percent
- Financial contributions made by local people to the development activity: NGOs, 52 percent; UN agencies, 71 percent
- Local participation in maintenance of the activity: NGOs–49 percent; UN agencies–71 percent
- The degree to which participants redesign a project activity: NGOs, 54 percent; UN agencies–57 percenr
- The number of local groups formed: NGOs, 53 percent; UN agencies, 71 percent
- Independent action taken by local groups: NGOs–53 percent; UN agencies, 71 percent
- Group cohesion and stability: NGOs–16 percent; UN agencies, 57 percent

As a means of triangulating these results, respondents were asked if community self-reliance is a goal of the respondent organization. A total of 88 percent of NGOs, 83 percent of UN organizations, and 83 percent of policy institutes responded in the affirmative.

Information about natural resource use and condition collected during monitoring

A multiple-choice, check-all-that-apply question was posed to learn about environmental monitoring practices of the respondent organizations. The following lists the areas monitored, as reported by the respondents:

- Changes in land or tree tenure: NGOs, 48 percent; UN agencies, 43 percent
- Changes in land use patterns: NGOs, 67 percent; UN agencies–43 percent
- Changes in access to common property resources: NGOs, 32 percent; UN agencies, 43 percent
- Changes in the level of conflict over natural resources: NGOs and UN agencies, 43 percent
- Changes in forest-based incomes: NGOS, 31 percent; UN agencies, 43 percent
- Changes in forest-based employment: NGOs, 26 percent; UN agencies, 43 percent
- Prices of forest products: NGOs, 32 percent; UN agencies, 29 percent
- Changes in the availability of minor forest products: NGOs, 32 percent; UN agencies, 29 percent
- Information about erosion: NGOs, 53 percent; UN agencies, 29 percent
- Sedimentation: NGOs, 24 percent; UN agencies, 29 percent
- Water quality: NGOs–44 percent; UN agencies, 29 percent
- Vegetation: NGOs, 69 percent; UN agencies, 29 percent

Information about farmers' knowledge and attitudes

Several observers (Chambers 1983; Salmen 1987) have noted the importance of indigenous technical knowledge held by local farmers. The survey included a multiple-choice, check-all-that-apply question about the information collected by respondents about farmers' knowledge and attitudes. Respondents reported monitoring the following:

- Changes in farmers' perceptions of the environment: NGOs, 71 percent; UN agencies, 29 percent

- Farmer awareness of tree-planting practices: NGOs, 65 percent; UN agencies, 14 percent
- Attitudes toward technologies being introduced to farmers: NGOs–60 percent; UN agencies, 57 percent
- Use of the technologies introduced: NGOs, 60 percent; UN agencies, 57 percent

Information about technological change and adoption

Respondents monitored information about technological change and adoption along the following dimensions:

- Adoption rates of an introduced technology within a target population: NGOs, 60 percent; UN agencies, 43 percent
- Diffusion of a technology beyond the target population: NGOs, 51 percent; UN agencies, 29 percent
- Local adaptation of an introduced technology: NGOs, 63 percent; UN agencies, 71 percent
- Local experimentation with an introduced technology: NGOs, 42 percent; UN agencies, 43 percent

Use of monitoring indicators

Monitoring indicators of various types are widely used in the development community. Of all respondents, 83 percent of NGOs, 86 percent of UN organizations, and 83 percent of institutes claim to use indicators during the monitoring process. There are, of course, many types of indicators used by development practitioners. Respondents reported using the following types of indicators:

- Participation: NGOs, 85 percent; UN agencies, 100 percent
- Output or physical action: NGOs, 71 percent; UN agencies, 86 percent
- Effect: NGOs, 64 percent; UN agencies, 86 percent
- Objective: NGOs, 67 percent; UN agencies, 100 percent
- Socioeconomic: NGOs, 47 percent; UN agencies, 100 percent
- Environmental within the project area: NGOs, 33 percent; UN agencies, 43 percent
- Environmental indicators outside of the project area: NGOs, 28 percent; UN agencies, 29 percent

Responsibility for monitoring

A series of questions were posed to learn about responsibility for various monitoring tasks, to learn more about *who monitors impacts* and *who makes management decisions based upon the information learned during monitoring*. This was done to better understand the degree to which local people are directly involved in management decisions. These basic issues are important in terms of the ultimate sustainability of the development activity by the local community. This is of particular interest where a development organization supports a project for a limited time, then passes control to a local group.

First, a question was posed asking *who has primary responsibility for project monitoring*. The most frequent response was the project manager (39 percent of NGOs and 57 percent of UN agencies). Project field staff have primary responsibility for 28 percent of NGO respondents and none of the UN organizations. Headquarters or regional staff have primary responsibility for 13 percent of NGOs and none of the UN organizations. Outside consultants were noted as having primary responsibility for 12 percent of NGOs and 43 percent of UN organizations. Local participants have primary responsibility in 8 percent of NGO projects and none of the UN organizations. Finally, extension staff were mentioned in less than 1 percent of NGO projects as having primary responsibility for project monitoring.

Respondents were polled in a multiple choice, check-all-that-apply question as to *who collects the information used in monitoring*. Local participants collect information in 57 percent of both NGOs and UN organizations. Project field staff collect information in 73 percent of NGOs and 57 percent of respondent UN organizations. The project manager collects information in 40 percent of the NGOs and 86 percent of UN organizations. Headquarters or regional staff collect information in 18 percent of NGOs and 29 percent of UN organizations. Government counterparts of personnel collect monitoring data in 71 percent of UN organizations, compared with 23 percent of NGOs. Extension workers collect information in 38 percent of NGO projects, and 43 percent of UN projects. And in 5 percent of NGO projects, but in none of the UN organizations, outside consultants and others collect information.

Respondents were then asked a multiple-choice, check-all-that-apply question: *Who analyzes the information collected during monitoring?* Participants analyze the information in 36 percent of NGOs, and 57 percent of UN projects. Field staff analyze information in 63 percent of NGOs, and

43 percent of UN organizations. The project manager analyzes monitoring information in 56 percent of NGOs, and 71 percent of UN organizations. Headquarters or regional staff are involved in analysis in 54 percent of NGOs, and 71 percent of respondent UN organizations. Government counterparts or personnel are involved in analysis in 23 percent of NGOs, and 71 percent of UN organizations. Extension workers analyze information in 25 percent of NGOs, and 28 percent of UN organizations. Consultants analyze monitoring information in 5 percent of NGOs, and 14 percent of UN organizations.

Finally, respondents were asked a multiple choice, check-all-that-apply question: *Who uses the information to make decisions about the project?* Participants make decisions in 43 percent of NGO respondent organizations and *57* percent of UN organizations. Field staff are involved in decision making in 65 percent of NGO and 29 percent of UN organizations. Project managers use monitoring infortnation to make decisions about the project in 72 percent of respondent NGOs and 86 percent of UN organizations. Headquarters or regional staff make decisions based on monitoring information in 56 percent of NGOs and 86 percent of UN organizations. Government Counterparts or personnel use the information to make decisions in 25 percent of NGO and 86 percent of UN organizations. The rate for extension workers was 18 percent for NGOs and 29 percent for UN. Finally, consultants and others use the infortnation to make decisions about the project in 6 percent of NGOs and 14 percent of UN organizations.

Needs and gaps

The survey attempted to identify gaps and needs in current monitoring practices. Multiple-choice questions were posed about how respondents would want current practices to be different, about training needs, and about respondents' perceived need for improved monitoring practices.

First, respondents were queried about their *preferences for changing current monitoring practices* within their organization. The following lists the preferences noted by the responding organizations:

- More training on monitoring and evaluation practices: NGOs, *73* percent; UN agencies, **86** percent
- More input from project participants in monitoring: NGOs, 64 percent; UN agencies, 71 percent

- Monitoring and evaluation should be less "top-down: NGOs, 46 percent; UN agencies, 86 percent
- More guidance from the organization on monitoring procedures: NGOs, 53 percent; UN agencies, 29 percent
- More information should be collected during monitoring: NGOs, 62 percent; UN agencies, 14 percent
- Less information should be collected: NGOs, less than 3 percent; UN agencies, none

Second, *training needs in monitoring and evaluation* were surveyed. Fully 61 percent of respondent NGOs and 43 percent of UN organizations indicated a need for more training in what kind of information to collect. A need for more training on organizing and interpreting monitoring information was expressed by 61 percent of NGOs and 29 percent of UN organizations. More than half of both groups (55 percent of NGOs and 57 percent of UN organizations) felt that more training in how to do environmental monitoring was needed. Training in how to do socioeconomic monitoring was a need stated by 60 percent of NGOs and 43 percent of UN respondents. And 61 percent of NGOs expressed a need for training in how to monitor participation, along with 57 percent of UN organizations. Fewer than 1 percent of all respondents felt that additional training was not needed.

Third, a scaled opinion question was posed to survey *perceived need for improved monitoring practices*. Of NGO respondents, 2 percent tended to agree that improved monitoring practices are needed, 17 percent agreed, and 79 percent strongly agreed. Asked the same question, 14 percent of UN respondents tended to agree, 14 percent agreed, and 72 percent strongly agreed. Only 1 percent of NGO respondents tended to disagree; there were no responses in either the disagree or strongly disagree categories.

Content Analysis

About one-third (n = 32) of the respondent organizations generously provided the researcher with internal reports, documents, and worksheets used in their monitoring process. A content analysis of the materials was done to document current and actual information collection and monitoring practices, as well as the types of monitoring information collected in the field. It should be noted that the content analysis is for illustrative purposes only, as the documentation provided is in many cases incomplete or not directly comparable. For example, some documentation did not provide details of

actual practices, but only noted that a type or class of indicator is in use. Results of the content analysis are summarized in Figure 1.

***Figure* 7. Content analysis of monitoring materials provided by respondents**

1. Organizations that base M & E on a logical framework: 26 of 32 (81%)
2. Organizations that use conventional input/output indicators: 19 of 32 (59%)
3. Organizations using mainly participatory monitoring and evaluation approaches: 5 of 32 (16%)
4. Organizations using both conventional and participatory methods: 8 of 32 (25%)
5. Organizations that monitor for change in a positive direction (e.g., physical actions, achievement of objectives, etc.): 22 of 32 (69%)
6. Organizations monitoring for change in a negative direction (e.g., problems encountered, negative impacts, etc.): 3 of 32 (9%)
7. Organizations that quantitatively measure participation (e.g., # of participants): 14 of 32 (43%)
8. Organizations that qualitatively measure participation: (e.g., type of participatory action, etc.): 7 of 32 (22%)
9. Organizations monitoring for group formation or empowerment: 3 of 32 (9%)
10. Organizations monitoring for participation of women: 7 of 32 (22%)
11. Organizations monitoring for impacts on subgroups: 3 of 32 (9%)
12. Organizations monitoring for aspects of technology adoption: 9 of 32 (28%)
13. Organizations monitoring for aspects of equity and distribution: 2 of 32 (6%)
14. Organizations monitoring for environmental impacts: 6 of 32 (19%)

From the content analysis, it is clear that the overwhelming majority of total respondents that submitted materials use a conventional logical framework approach to monitoring and evaluation (81 percent) and rely on conventional input-output indicators (59 percent). More than two-thirds (69 percent) of respondents monitor for social impacts only in a positive direction, while only 9 percent also look specifically for negative social impacts. About a quarter (25 percent) combine logframe with participatory methods, but only

16 percent rely primarily on participatory monitoring and evaluation approaches.

The materials suggested a wide range of practices for monitoring local participation and other social interactions and processes such as empowerment, decision making, and leadership. Only 9 percent were found to monitor or evaluate specifically for changes in this area. Fewer than a quarter (22 percent) were found to monitor specifically for the participation of women, which contradicts the survey results, where 69 percent of NGOs claim to monitor the gender of local participants. Only two organizations use indicators or criteria of equity or distributional impacts. Finally, six organizations (19 percent) monitored for environmental impacts, and of these, four were national NGOs. Nine organizations (28 percent) monitored for technological change, such as the adoption of an introduced technology.

There are, of course, limits to the generalizability of this content analysis to a larger population of development organizations. Nevertheless, this cursory review of materials submitted by respondents suggests that respondent organizations rely mainly on conventional input-put monitoring and evaluation frameworks, and generally do not anticipate or monitor for negative impacts. The content analysis suggests that there is considerable scope for improving current practices in monitoring aspects of local participation, gender, and environmental impacts associated with development projects. The findings of the content analysis are also useful as a validity check, and suggest that there is a difference between perceived and actual practices on the part of the respondents.

Follow-up Interviews

About 40 informal, unstructured interviews were conducted in Asia, Africa, Europe, and the United States with representatives of 17 respondent organizations, as well as extensive follow-up correspondence with key informants from various NGOs. The purpose of the interviews was to uncover other factors or issues related to monitoring that might not be captured in the survey or content analysis. The qualitative information gained during the interview process was very useful in constructing a more complete picture of needs and gaps suggested by the quantitative global survey.

First, there was general dissatisfaction expressed by many interviewees about the quality and scope of their current monitoring practices, in that the monitoring did not provide adequate or meaningful information about project

impacts. For example, the field director of a large international NGO stated, "We really don't know how our programs impact local people." In another case, a correspondent from a large European NGO wrote, "Our organisation is lacking a sound monitoring and evaluation system for its programme. We (do not] have good guidelines to ensure correct attention for environmental stability/sustainability within any of our future interventions." Representatives of two international NGOs commented that, in their experience, a monitoring protocol or strategy had never been established at the outset of the projects they were concerned with; they felt that monitoring is generally overlooked as a management function.

Interviewees frequently expressed frustration at their inability to understand socioeconomic impacts and with the fact that conventional logframe input-output indicators could not better inform them of socioeconomic impacts. A number of interviewees stated that current monitoring practices could not alert them when projects created local-level problems. Some noted that initial design problems negatively affected local communities and ecosystems, and that such problems were not detected by conventional input-output indicators. All interviewees expressed a need for new, innovative, practical methods of assessment and monitoring, and for decentralized approaches that could better capture both positive and negative impacts. As one project manager stated, "We need to do better — we should be putting much more time and effort into developing better monitoring systems. How else can we know if our projects are working'?"

Second, several interviewees stated that they had limited time available to do an adequate job of monitoring. Many organizations monitor only on an *ad hoc* basis because of lack of time, as well as the absence of a structured framework that could signal *when* to monitor. Some suggested that monitoring should extend beyond the duration of the project timeframe, because some negative impacts might not become apparent until later.

Third, many interviewees noted that they lacked information about practical, hands-on monitoring resources and methods. One person said that while *evaluation* manuals and materials are available, information about *monitoring* is far less available, and is generally overlooked in development publications. While there are many approaches and frameworks for evaluation (e.g., goal-free evaluation, participatory evaluation, etc.), there are apparently few practical, hands-on materials available about how to establish a monitoring program; what and when to monitor; how to monitor socioeconomic or

environmental impacts; how to analyze, summarize, and store information; or how to apply the information learned in monitoring.[11]

Fourth, several interviewees of larger organizations noted that they would like to have local participants more involved in monitoring and other aspects of project management, but did not know how to do so. Interviewees and key informants with smaller NGOs in Asia and Africa seemed generally more conversant and experienced with participatory methods in the interviews than were representatives of the larger, international NGOs or the UN organizations.

All of the interviewees from larger, international NGOs stated that they are re-evaluating or considering revising their M & E strategies because of dissatisfaction with current practices. Interviewees noted that their efforts to revise their M & E systems were hampered by lack of time, lack of successful models or innovative methods upon which to base new practices, and inexperience with field-level techniques and methods.

SYNTHESIZING INFORMATION FROM THE RESEARCH TOOLS

The three research tools (survey, content analysis, and follow-up interviews) provided both an opportunity to compare and contrast quantitative and qualitative data and a means of triangulating the research findings. The three tools tended to confirm the same general monitoring patterns and findings related to needs and gaps, but with varying degrees of magnitude. The survey results indicated generally higher patterns of response concerning monitoring practices than those uncovered in the content analysis. In particular, a higher number of organizations in the survey claimed to monitor various aspects of local participation (such as gender) and environmental conditions than was suggested by the monitoring materials provided to the researcher by respondents. This may be due in part to over-reporting because of the multiple-choice, check-all-that-apply questionnaire format.

[11] A handbook on monitoring frameworks and techniques is in preparation by the author. See also Eckman 1993, 1994, and forthcoming (a) and (b).

The content analysis provided an opportunity to visually examine M & E guidelines, worksheets used in the field, and data collection and storage methods in actual use. The relatively high response rates for some questions in the survey were, in some cases, contradicted by the content analysis and by follow-up interviews and site visits with many survey respondents. An example is the most frequently checked category in the survey about what type of information is monitored: 84 percent of all organizations checked the gender category, yet the content analysis found evidence that only 26 percent of respondents providing documentation actually record the gender of the participants in any given activity.

The informal follow-up interviews, site visits to a number of NGO field projects, and correspondence yielded a great deal of qualitative, rich detail concerning monitoring. The interviews in particular enabled survey respondents to volunteer additional information not covered in the survey. It also enabled respondents to discuss their concerns and perceived needs concerning monitoring practices. This research tool was invaluable in helping to explain and understand monitoring issues in practical terms, as expressed by the respondents.

By combining the findings from all three tools, it was possible to get a richer impression of needs and gaps, as well as possible opportunities for improving praxis, as summarized in the next section.

NEEDS AND GAPS IN PROJECT MONITORING

Both qualitative and quantitative findings suggest that there are several key areas where gaps and needs are concentrated. First, nearly all interviewees expressed concern about inadequate scope and breadth of monitoring. The interviews, content analysis, and survey results suggest that **both socio-economic and environmental impacts are inadequately monitored**, with high reliance on input-output or objective-oriented indicators (e.g., numbers of trees planted or holes dug or number of meetings attended). Such quantitative indicators do not inform as to who actually benefited from the activity, or in what way. In addition, most organizations monitor for impacts in a positive direction only (that is, toward goal attainment), with only 9 percent monitoring for negative impacts.

The research findings suggest that important aspects such as tenurial relations and access to common property resources, conflict over natural resources, erosion and water quality, the impact of introduced technologies, and changes in incomes and employment could be better monitored. Seasonality is another area that does not appear to be well captured by existing monitoring patterns, as noted below.

Second, **insufficient time, transport, and resources for monitoring** were widely confirmed by all three research tools. During the interviews, lack of transport and time was noted to contribute to irregular and infrequent monitoring, and to an avoidance of monitoring visits during rainy seasons and periods of bad weather. This suggests that some subtler socioeconomic and environmental processes that are influenced by seasonality in rural villages may be overlooked. There was considerable anecdotal evidence that both local participants and project personnel lack the resources, information, and authority to develop and use participatory monitoring methods. Therefore, the development of new tools should take the constraints of users into consideration. The research findings also suggest that it would be useful for NGOs to allocate greater resources for monitoring, not only as a management function, but also as a means of fostering increased levels of local participation in project management.

A third area of concern is the **limited extent to which local participants are directly involved in monitoring tasks and in decision making**. The survey data suggested a hierarchic pattern of increased centralization in monitoring and decision making, moving from data collection, to analysis, to using the monitoring information to make decisions about the project, to decision making. Among UN agencies, primary responsibility for monitoring is delegated only to consultants (43 percent) or the project manager (57 percent). Among the NGOs, only 8 percent indicated that local participants have primary responsibility for monitoring. The quantitative data indicate a pattern in which decision making is skewed toward organizational staff and outsiders (e.g., consultants) rather than local participants. This pattern was strongly supported by the content analysis and interviews. Many professionals interviewed expressed concern that participatory assessment, monitoring, and decision-making frameworks be better integrated into development programs. It is logical to assume that those who are the long-term actors in a development activity (presumably local stakeholders) should be the same as those who monitor the activity for impact.

RECOMMENDATIONS AND CONCLUSIONS

This section proposes several recommendations to address some of the needs and gaps identified during this study. The recommendations are not based solely on the quantitative research, but derive also from the qualitative content analysis and extensive follow-up interviews. The recommendations are designed to address many of the concerns expressed by NGO staff.

A major conclusion of this preliminary study is that monitoring is generally overlooked as a management tool by NGOs. Monitoring appears to take a back seat to evaluation, with many organizations budgeting instead for periodic, formal evaluations. Yet monitoring has the potential to significantly improve project impacts without high investment costs, and can also better inform the decision-making process. Continuing a "business as usual" monitoring pattern will simply perpetuate existing informational gaps and problems for many agencies. Reorienting and intensifying monitoring practices can greatly contribute to more cost-effective, socially effective, and successful projects. Monitoring can also be regarded as a means of community awareness, local empowerment, and consensus building when it involves the use of participatory methods such as PAME. To that end, the following recommendations are proposed.

1. Decentralize the monitoring process and involve local people

Local participation is the key to successful, effective monitoring. Local people are most familiar with the condition of their near environments and are the ones who will ultimately be responsible for its long-term care and management. Evidence suggests that rural people are not only capable of sophisticated environmental and socioeconomic monitoring, but have used traditional early warning monitoring systems for generations (Rahmato 1991).

The study clearly confirms that the monitoring process involves different people at different stages. Those who collect monitoring information are not necessarily the same people who analyze the information, or who use the information to make decisions about the development activity. In logframe projects, coordination and communication must be established across the different levels of monitoring tasks; a feedback mechanism should also be established. In more participatory projects, an informal forum for discussing the monitoring information can be set up at the local stakeholder level. All local resource user groups should be adequately represented in monitoring.

Some facilitation or negotiation between different local resource user groups may be needed where several different interest groups rely on the same resource.

Decentralization of monitoring could solve some of the logistical problems and resource constraints noted by NGO field staff, and enable more community feedback about local inputs and impacts. This could also increase the potential and opportunity to devolve responsibility and authority to local stakeholders, and increase local self-reliance in terms of management of the activity. However, the study findings suggest that additional training in monitoring for stakeholders at all levels (participants, extension staff, field staff, etc.) is needed for decentralization to be effective.

2. Provide adequate resources for monitoring

As noted, inadequate resources (funding, staff, materials or equipment, training, information, transport and fuel, per diems, etc.) can contribute to monitoring problems, and greatly hamper field staff in their daily work with local participants. In addition, funds previously allocated for monitoring and evaluation are sometimes transferred to other budget lines. Long-term organizational commitment is required to ensure that adequate resources are made available to those with responsibility for monitoring project impacts. Such commitment must be established through organizational and administrative policies and in budget commitments.

Organizations might contrast their administrative funding cycles with seasonal cycles at the local level and ensure that funds for project implementation and monitoring are available when they are needed. Too often funding is approved too late in the growing season, which is not cost-effective. Timeliness of both monitoring practices and of funding cycles is of great importance to field-level workers, and regional or headquarters staff are sometimes not aware of the local-level impacts of administrative and financial delays.

Probably the most important resource needed by those responsible for monitoring is increased information and training in how to monitor for both socioeconomic and environmental impacts. Organizations can help both field staff and participants improve their monitoring skills by providing training and information about monitoring frameworks, participatory methods, and by providing guidelines and "how-to" handbooks or manuals and materials

on practical, hands-on methods, techniques, and tools on how to monitor development projects.

3. Create organizational flexibility for monitoring

Most development projects last only a few years, but their impacts may extend beyond the spatial and temporal limits of the project. Most organizations concern themselves only with the project site or target area and the two- or three-year project lifespan. Conceptually and organizationally, greater flexibility is needed. Organizational staff must free themselves of these artificial and arbitrary boundaries and look beyond the confines of the project itself.

Development agencies must also consider their ethical responsibility to local communities, where a project initiated by a donor might have longer-tern1 negative environmental or socioeconomic impacts that endure beyond the project timeframe. Budgetary provisions for long-term, post-project monitoring should be included as standard practice in project budgets to ensure the sustainability of project benefits and to alert stakeholders to potential unsustainable outcomes.

4. Use a precautionary monitoring approach

Using the precautionary monitoring approach to aid the planning process (Eckman 1994; Eckman forthcoming (a) and (b)) should be considered when initiating a relief or development activity. Precautionary monitoring requires a greater focus on **outcomes** rather than **outputs.** Monitoring for physical outputs and targets is necessary but not sufficient for capturing other important impacts and outcomes resulting from a project activity.

A precautionary monitoring strategy includes unsustainability indicators, early warning signs, and a feedback/decision-making structure. By anticipating and specifically monitoring for undesirable outcomes, it becomes easier to deal with problems as they emerge, and before they become unmanageable. Adopting a Precautionary monitoring approach requires a commitment and reorientation on the part of a development organization toward decentralization, as well as a much stronger participatory role in project decision making and management. Toward this end, a development organization will probably need to commit more organizational resources and attention to the monitoring process in terms of communications, coordination, training, and staff time associated with local-level field work and community-based meetings.

Ironically, using a precautionary monitoring approach may be more important in top-down projects that do not have an emphasis on local participation, to ensure that the project does not create unanticipated environmental and socioeconomic problems for the targeted beneficiaries. The essential task of monitoring in such instances is to make sure that the project makes sense in terms of socioeconomic well-being and maintenance of the natural resource base and, more fundamentally, how people use those resources. It is critical that an externally planned project does not cause more problems than it solves, that it does not increase the vulnerability of local people, does not introduce conflict among different participant groups, or lead to a decline in overall natural resource condition.

5. Develop and test new monitoring tools and approaches

Respondents expressed a strong perceived need for improved, practical monitoring and evaluation methods and for more training in aspects of socioeconomic and environmental monitoring. The research findings suggest that the following should be considered when developing new impact assessment or monitoring methods and tools:

- Training needs should be assessed, and training in monitoring frameworks and techniques provided for staff and local participants.
- Given stakeholder constraints, new methods and tools should not be demanding of resources or time and should provide information and guidance about why and how to monitor, and when (frequency and duration).
- The duration of monitoring should extend beyond the scheduled termination of the project to capture impacts that emerge after the project ends.
- There should be clear delineation of lines of responsibility and authority for monitoring tasks over the long term, with responsibility decentralized to local participants as much as possible.
- New tools should focus on local participation in the monitoring and decision-making process and rely chiefly on participatory methods.
- The monitoring process itself should be critically monitored and periodically adjusted to ensure that the monitoring system is meeting the information needs of the stakeholders.

6. Create a positive policy environment for monitoring

At the policy level, much can be done to create an overall policy environment that encourages more effective monitoring (Eckman 1995):

- Require that all development programs are monitored for *both* environmental and socioeconomic impacts on a routine basis (Canter 1993).
- Establish policies requiring baseline environmental and social impact assessments for larger-scale development projects, against which longitudinal monitoring data can be compared.
- Establish a national archive or data clearinghouse for reports and materials (such as socioeconomic surveys and remote sensing data) that may be used when monitoring rural development projects, and require that all expatriate agencies (including foreign universities) leave complete data sets and reports with the archive before quitting the country.
- Establish policies supporting the use of precautionary monitoring in government multiyear plans and in ODA and NGO development programs, as a complement to conventional monitoring and evaluation.
- Support decentralized decision-making structures in development programs, including the use of participatory assessment, monitoring, and evaluation approaches.
- Ensure that adequate government resources (staff or stakeholder training, equipment, transport, fuel, per diems, etc.) are available on a timely basis to those doing the monitoring.

7. Further research needs

This study has been preliminary, and the conclusions presented in this paper are regarded as tentative. However, the study raises several issues and questions for further research:

- Other independent studies are needed to confirm the results obtained in this first exploratory study.
- More research needs to be done on the current use of participatory M&E methods in the development community to identify successful models and methods (what works; what doesn't).
- Further research on testing on precautionary monitoring measures is needed to refine and adapt the approach to a range of development activities and organizations.
- Further critical analysis should be done on conventional methods, so that long-established techniques can either be adapted to contemporary conditions and participatory methods, or retired from the current M&E repertoire in favor of more sensitive methods that can better inform project stakeholders.

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