Design and Baseline Data for a Monitoring and Evaluation System

Draft M&E Concept Paper and Elements for the M&E Operational Manual

Moldova Social Investment Fund II Project

February 10, 2003

The author would like to thank the MSIF staff, especially, Mr. Ion Stanciu, Constantin Enciu for their dedication, ideas and hard and good work in supporting the developing and implementing of the proposed Monitoring and Evaluation System framework. Without them this product would not have been possible and their continued support of the system will be critical for the M&E of the Moldova Social Investment Fund II Project in the future.

This document was prepared by James A. Cercone

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Preface

The Government of Moldova (Borrower) has applied to the World Bank for a loan to finance a Second Social Investment Fund (MSIF II). The project will contribute to the implementation of Moldova's Economic Growth and Poverty Reduction Strategy by empowering poor communities and vulnerable population groups to manage their priority development needs through the improvement in delivery and quality of basic social and economic services; and through the development of the capacity of the community institutions and the strengthening of social capital.

The objectives will be addressed through the implementation of four main project components:

Component 1 – Community Development would finance activities under three sub-components: (i) rural micro-projects; (ii) pilot urban projects (small towns); (iii) community-based organizations (CBOs) and local government capacity building.

Component 2 – Social Care Services Development would finance activities under the following two sub-components: (i) social care services micro-projects; and (ii) capacity building for central (social assistance offices) and local government and service providers.

Component 3 – Communication, Monitoring and Evaluation and Capacity Building would provide funding for the following three sub-components: (i) capacity building of governmental institutions and learning of policy lessons; (ii) communication, dissemination and replication of best practices; and (iii) participatory monitoring and evaluation. The pilot CDD JSDF now under the implementation is expected to produce the lessons for the PM&E and a guide on the PM&E will be prepared cased on the pilot experience.

Component 4 – Project Management would provide funding for project implementation and mainly support the SIF Executive Office operations.

These components address the following sector specific issues:

Community-based Services: The project will support improvement of basic community services, such as education, water and transport services, heating and environment. The strategic choice of the project is to provide the Government with tools to improve basic services with the participation of the community members in the decision-making and management.

Capacity of Community Institutions: The first SIF project has very much focused on the development of the institutional capacity in the participating communities. The proposed project will continue this and take it one step further by focusing on the development of capacities of community-based organizations (CBOs) and institutions. This is a strategic choice that would allow empowering citizens and giving them a voice in the decisions that affect community life.

Social Care Services: The project will support planning and development of the social care services system in at least three pilot regions with the diversification of service provision (involving NGOs and CBOs) and create the model for possible replication at the national level. The project will also contribute to the development of the institutional capacity of central and regional level to identify and assess service needs, coordinate activities, raise public awareness, and monitor and evaluate the social impact of these services. The strategic choice here is to move from the supply based provision of services to the needs/demands based planning and service provision with participation of private organizations.

Decentralization and Governance: The first SIF project has greatly contributed to the development of the local government institutions (primaria) and their transparency and accountability to the community members and citizens. The strategic choice for the second project would be to continue this and further develop the accountability mechanisms and practices of the local governments in participating communities.

In January 12 2003, James Cercone, M&E consultant, was retained by the Moldova Social Investment Fund to design the Monitoring and Evaluation system for the Project. The scope of work includes the development of the conceptual framework for the M & E system for the upcoming MSIF II project. The work was carried out with active involvement of the Moldova Social Investment Fund staff and other external consultants who are supporting the MSIF during the present preparation stage.

The objectives of the monitoring and evaluation system will be to support decision makers in the assessment of the project's impact on (i) Community Development; (ii) Social Care Services Development; and (iii) Communication, Monitoring and Evaluation and Capacity Building.

Monitoring and evaluation (M&E) is increasingly recognized as an indispensable tool of project management. The acknowledged need to improve the performance, both to support the implementation of the project and to feed back into the design of new initiatives in Moldova's Social Investment Fund project (MSIF), and underlines the development of a comprehensive M&E system to support the project. The M&E system will be an integral element of the drive to a performance based management system and to expand the learning and feedback process into the second project. Furthermore, the M&E system, in combination with the Participatory Monitoring and Evaluation (PME), will be critical to improving accountability and distribution of results to all stakeholders.

1. Introduction

The development of a monitoring and evaluation (M&E) framework seeks to ascertain whether the instruments and mechanisms developed for the implementation of the Moldova Social Investment Fund project (MSIF) achieve the project's development objectives. The purpose of monitoring the Social Investment Fund II project is to both define and analyze the project's structure and its functions and up to what point the project will contribute in the improvement of quality of the basic services, infrastructure and building local capacity in the participating communities. The proposed project will contribute to the implementation of the strategy by targeting resources to the poorest rural communities.

In addition, the M&E framework should help to examine, as far as it is possible, the impact or effects of each of the elements of MSIF; to recommend how future evaluations in relation to the objectives of the project can be undertaken; and to draw whatever conclusions are possible in relation to the implementation of MSIF activities.

The evaluation and monitoring of the programmed activities is intended to promote learning and accountability by identifying what works and what doesn't, by disseminating lessons of experience; to evaluate community based development effectiveness in terms of the results of MSIF components and its activities.

This document defines M&E and describes its role in the Moldovan Social Investment Fund project, especially in the management aspects of the project. It discusses the various contents and functions of evaluation and their relation in the decision making process. It also describes the development and assessment of the baseline indicators for the monitoring and evaluation process of the project.

After this brief introduction, section two provides a brief background of the development of the Social Investment Fund project and its objectives. Section three explains in detail what monitoring and evaluation is, describes its components and outlines how it will be used to analyze the project. This section discusses in detail the methods and mechanisms used in the evaluation of the Moldova Social Investment Fund, including monitoring and trend analysis. Section four of this document includes the methodology for M&E, selection of proposed indicators to analyze the projects progress. It defines the aspects to be measured through the collection of indicators, the baseline list of indicators, and the sources used to collect this information. Also included in this section is the methodology for the baseline survey, which will be used for the collection of different dimensions, reflected in the baseline indicators. Section five outlines key elements in the design of an M&E system. Section six highlights critical elements for the design of an information system used to input all data gathered from the indicators at the PM & E and M & E level. Section seven outlines the implementation plan, including timing, responsibility and budget of the monitoring and evaluation of the project. Section eight outlines the issues related to timing and responsibility for implementation. Section nine includes the references to this inception report.

2. Background

Moldova is a low-income country and has suffered one of the steepest falls in income in the Former Soviet Republics (World Bank 1999). Despite a slight improvement in absolute and relative poverty levels in Moldova in the last year (3rd Quarter HBS 2003), poverty rates are among the highest in Central and South Eastern Countries. The poverty rates averaged 63 percent from 1997 to 2001. The poverty rates have been increasing from 1997 to 1999, from a rate of 47 percent to 71 percent caused by the vulnerability of the Moldovan economy to the Russian crisis. From 2000 to 2001 the poverty rate started to decrease (reduction of 11.6 percent), however, still the poverty rate was 60 percent in 2001 and remains higher than it was before the 1998 Russian crisis. As in 1997 the majority of poor in Moldova live in rural areas, however, there is a growing poverty in the small towns. The Minimum consumption basket ('minimum subsistence') for Moldova is calculated at 233 Lei per month per person (19.5 Euro). Based on the 1999 household budget survey, 79% of the population has an income below this level. Further, it can be seen that around 90% of the population lives on less than 1 USD a day (Economic Trends 2001). If one measures headcount poverty by the official poverty line (30% of the Subsistence Minimum) then some 21% of the population are very poor. Of this group of Very Poor, landless workers and agricultural employees in rural areas (65%) and large families (30%) are at most risk (World Bank 1999).

The National Human Development Report for the Republic of Moldova reflects the changes and the problems of human development during the past years, including 1995. The process of profound political, economic and social changes demonstrates that Moldova has irreversibly started down the path to democracy, transition to a market economy and integration into the international community. The transition stage has revealed new horizons for capitalizing resources and human potential and for integration and the development of its civic society - the necessary conditions for sustainable human development. Most of the population of Moldova has undergone profound changes in social psychology, political consciousness, attitude and civic behavior.

The building of the state and the integration of the society in the Republic of Moldova requires an increase in the efficiency of the national and the local authorities, which is being achieved through the establishment of a judicial framework and the creation of a reasonable balance of state administration and civil society.

The first SIF project has demonstrated that through the process of facilitation of community participation and involvement of all population groups in the decision-making and implementation can to a certain extent overcome this problem and revitalize the community life. The proposed project will aim at developing and implementing the empowerment concept and providing the poorest part of the population with voice and choice.

3. Basic Elements of Evaluation and Monitoring

Monitoring and evaluation (M&E) is increasingly recognized as an indispensable tool of project management. The acknowledged need to improve the performance, both to support the implementation of the project and to feed back into the design of innovative initiatives in Moldova's Social Investment Fund program (MSIF), will constitute the basis for the development of a comprehensive M&E system.

3.1. A Better Understanding of Monitoring and Evaluation

Monitoring and evaluation help to improve performance and achieve results. More precisely, the overall purpose of monitoring and evaluation is the measurement and assessment of performance in order to more effectively manage the outcomes and outputs known as development results. Performance is defined as progress towards and achievement of results. As part of the emphasis on results, the need to demonstrate performance is placing new demands on monitoring and evaluation. Traditionally, monitoring and evaluation focused on assessing inputs and implementation processes. Today, the focus is on assessing the contributions of various factors to a given development outcome, with such factors including outputs, partnerships, policy advice and dialogue, advocacy and brokering/coordination. Program Managers are being asked to actively apply the information gained through monitoring and evaluation to improve strategies, programs and other activities.

The main objectives of today's results-oriented monitoring and evaluation are to:

- Enhance organizational and development learning;
- Ensure informed decision-making;
- Support substantive accountability and MSIF repositioning;
- Build country capacity in each of these areas and in monitoring and evaluating functions in general.

Monitoring can be defined as a continuing function that aims primarily to provide the management and main stakeholders of an ongoing intervention with early indications of progress, or lack thereof, in the achievement of results. An ongoing intervention might be a project, program or other kind of support to an outcome.

Evaluation is a selective exercise that attempts to systematically and objectively assess progress towards and the achievement of an outcome. Evaluation is not a one-time event, but an exercise involving assessments of differing scope and depth carried out at several points in time in response to evolving needs for evaluative knowledge and learning during the effort to achieve an outcome. All evaluations—even project evaluations that assess relevance, performance and other criteria—need to be linked to outcomes as opposed to only implementation or immediate outputs.

Reporting is an integral part of monitoring and evaluation. Reporting is the systematic and timely provision of essential information at periodic intervals.

Effective M&E is based on a clear, logical pathway of results, in which results at one level are expected to flow towards results at the next level, leading to the achievement of the overall goal. If there are gaps in the logic, the pathway will not flow towards the required results. The major levels are:

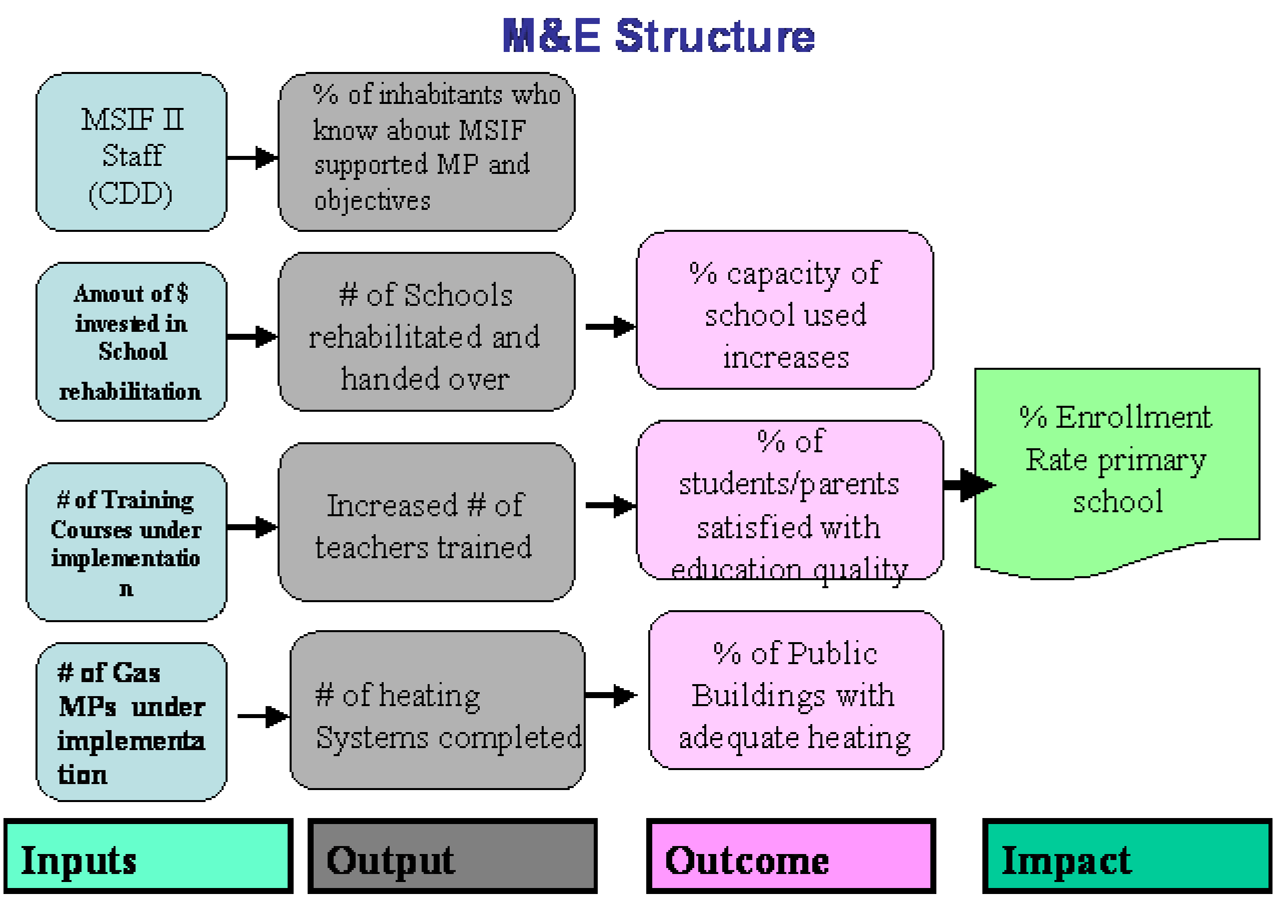
- inputs
- outputs
- outcomes
- impacts

***Table 1**: Major levels of the M&E framework*

Level	Description
Inputs	People, training, equipment and resources that we put into a project, in order to achieve outputs.
Outputs	Activities or services we deliver in order to achieve outcomes. The direct result of the implementation of the activities comprising the project's components and sub-components. The processes associated with service delivery are very important. The key processes include quality, unit costs, access and coverage.
Outcomes	The effects of the project outputs, which are defined in terms of the objectives of the project. These should be measurable and occur during the life of the project ("outcome")
Impacts	These outcomes, reflected generally after the project ends, are the result of project interventions and can be clearly attributable to the project. Generally these impact indicators are linked to: (i) improvements in the delivery and quality of basic social andEconomic services: (ii) development of the capacity of their institutions and strengthening social capital provided through SIF interventions.(iii) influencing policy makers based on MSIF experience and lessons learnt)

Below we demonstrate a useful scheme to visualize the monitoring and evaluation components, from inputs to impact. The results pathway or cycle, shown in the figure below, may be likened to a pyramid. The higher up the results cycle we go, the fewer organizations, projects and studies are involved in M&E. Thus, all implementing partners should collect complete input and output data. Many implementing partners should collect some outcome data. Far fewer implementing partners will collect impact data. The figure shows specific indicators, as an example, for project.

Figure 1

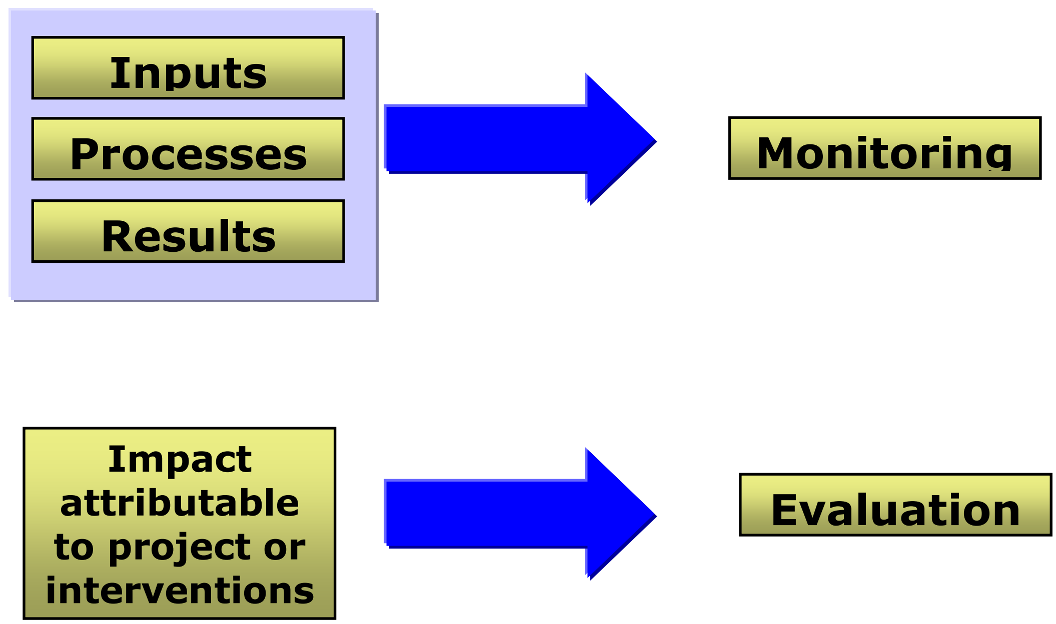


The development of a monitoring and evaluation (M&E) framework seeks to identify whether the instruments and mechanisms developed for the implementation of the Project achieve the previously mentioned objectives as mandated. The purpose of monitoring the Project is to both define and analyze the project's structure and its functions. The purpose of evaluating the MSIF project is to determine at what point the program is effective in helping in the improvement of the delivery and quality of basic social services: and the development of the capacity of their institutions and strengthening social capital provided through its interventions.

The following graph shows the main differences between monitoring and evaluation.

Figure 2

What are differences between monitoring and evaluation?



As shown, **monitoring** is concerned with the assessment of how inputs, processes and results are used and produced during the implementation of the project to the extent they are contributing to the achievement of results. The monitoring process is ongoing, encompassing periods that may include monthly, quarterly or yearly monitoring.

All monitoring and evaluation efforts should address, as a minimum:

- **Progress towards outcomes**: This entails periodically analyzing the extent towhich intended outcomes have actually been achieved or are being achieved;

- **Factors contributing to or impeding achievement of the outcome**: This necessitates monitoring the country context and the economic, sociological, political and other developments simultaneously taking place;

- **MSIF contributions to the outcomes through outputs**: These outputs may be generated by programs, projects, policy advice, advocacy and other activities. Their monitoring and evaluation entails analyzing whether or not outputs are in the process of being produced as planned and whether or notthe outputs are contributing to the outcome;

- **The partnership strategy:** This requires the design of partnership strategies to be analyzed as well as the formation and functioning of partnerships. This helps to ensure that partners who are concerned with an outcome have a common appreciation of problems and needs, and that they share a synchronized strategy.

Evaluation, on the other hand, is more concerned with the long-term goals or impact of the project, evaluated in a systematic framework. Evaluations are carried out every 2-4 years and at the end of the project. In this context, the project evaluation seeks to ascertain what the impact of the project was on the target population and to what extent the objectives were achieved with the resources consumed.

At a minimum, the scope of an outcome evaluation should incorporate the following four categories of analysis, either fully or in part. Categories of analysis:

- Outcome status: Whether or not the outcome has been achieved and, if not, whether there has been progress made towards its achievement;

- Underlying factors: An analysis of the underlying factors beyond MSIF II control that influence the outcome;

- MSIF II contribution: Whether or not MSIF II outputs and other interventions can be credibly linked to achievement of the outcome, including the outputs, programs, projects and soft and hard assistance that contributed to the outcome;

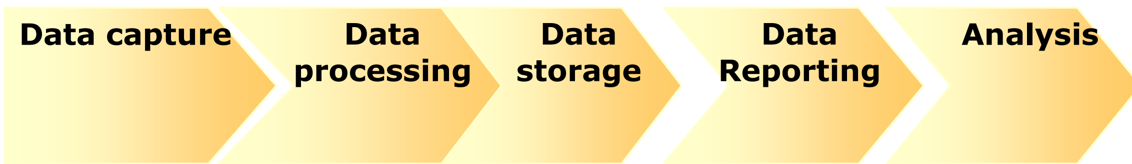
- Partnership strategy: Whether MSIF II's partnership strategy has been appropriate and effective.

The evaluation and monitoring of the programmed activities in the MSIF II, is intended to promote learning and accountability by identifying what works and what doesn't, by disseminating lessons of experience; to evaluate lessons in; (i) project governing structure and management (NB and EO); (ii) monitoring and evaluation; and (iii) community participation and local capacity building (PM & E).

The final aspect of an M&E system is to develop clarity regarding the flow of information from data reporting through data analysis. The conceptual framework of the M&E system defines how the system functions at each stage of the value chain and assigns clear responsibility. The following figure shows how the different stages of the M&E system operate.

Figure 3

Value chain in M&E



Data capture
- Manual using forms community Level (PM & E)
- Manual direct observation
- Manual surveying

Data processing
- Depend on connectivity
  - On line
  - Diskette
  - Paper
- Automatically check data consistency
- Quality
- Audit

Data storage
- Data warehouse
- Levels of security
- Distribute info

Data Reporting
- Reporting
- Export to Excel
- Export other systems
- Standardize reports to partners
- Visual identification of problems / trends

Analysis
- Specialized centers analyze impact
- Researchers with special access
- External assistance

As shown, the system runs from data capture, to data processing, data storage, data reporting and analysis. Each of these elements is critical to defining a comprehensive and integrated M&E system.

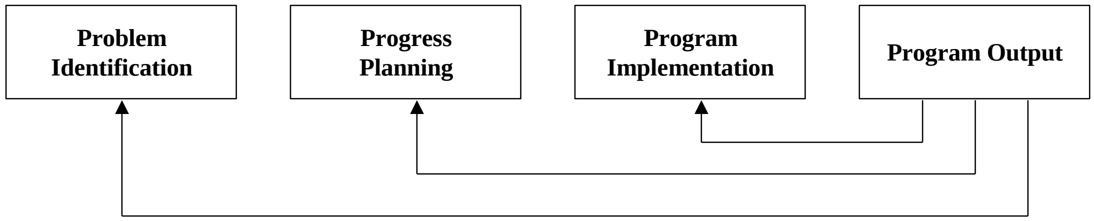
The following sections define in greater detail the theoretical framework for the development of the M&E system.

What is monitoring?[1]

Monitoring is the continuous and methodical assessment of data throughout a project in order assist management in daily decision making. Good management relies on monitoring for continual improvement of operations and project outcomes. Monitoring analyses data collected and constantly compares the results with the project expectations. If these do no coincide there is need for modification of the plan, the process, the expectations, or a combination of these.

[1] Veney, James E. and Kaluzny, Arnold D., Evaluation & Decision Making for Health Services, Table 1.1 p.4. Health Administration Press, Chicago, Illinois, 1998.

Monitoring focuses on permanently providing feedback to the different stages of the project as shown in the following diagram.



As previously mentioned, monitoring has to do primarily with providing intermediate information for project decision making relevant with the adequacy, progress, efficiency, and effectiveness of the program. Collecting information during the planning stage helps define if a project is able to adequately address the problem. The continuous assessment of intermediate data during the implementation stage provides information on whether the processes are being implemented, as they should, and if they are producing the expected results in the most efficient manner. Finally, monitoring provides intermediate data on whether the short-term benefits justify the costs.

Monitoring outcomes in the MSIF project will focus on aspects of community participation, improvement of Social Care services, through the implementation of the MPs in the project components and in the Project Management as well. As an example the monitoring of different education/social care services status indicators compared before and after MSIF projects will help to determine if the project outcomes are meeting the project development expectations.

What is Project Evaluation?

Evaluation is a periodic and systematic process that uses quantitative and qualitative methods for the collection, analysis, and interpretation of data. The purpose of this process is to determine the relevance, adequacy, progress, efficiency, effectiveness, impact, and sustainability of the program activities.

An impact evaluation assesses changes in the well being of individuals that can be attributed to a particular project, program or policy. I is aimed at providing feedback to help improve the effectiveness of programs and policies. Impact evaluations are decision-making tools for policy makers that promote accountability to the public. There are other types of program assessments including organizational reviews and process monitoring, but these don't estimate the magnitude of effects and assign causation. Such a causal analysis is essential for understanding the relative role of alternative interventions in reducing poverty.

The following table defines the evaluation components previously mentioned:

Table 2

Evaluation Component	Definition
Relevance	Evaluation of the appropriateness or equity of a program or the correspondence between the program and the needs for the program that is based specifically on a priori judgment.
Adequacy	Evaluation of the extent to which a program is likely to be able to address the entire range of a problem that is based specifically on a priori judgment.
Progress	Evaluation of the extent to which scheduled activities occur on time, in the manner expected (e.g., according to professional standards), and at the budgeted cost and produce expected outputs.
Effectiveness	Evaluation of the extent to which the program has produced expected intermediate outcomes (effects). Assumes a causal connection between the program and the effect.
Impact	Evaluation of the extent to which the program has produced expected ultimate outcomes (impact). Assumes a causal connection between the program and the impact.
Efficiency	Evaluation that assesses the relationship between input and outcome, either intermediate (effects) or ultimate (impacts).
Sustainability	Evaluation of whether a program can capture the needed resources to sustain itself after the withdrawal of external support.

Source: Veney, James E. and Kaluzny, Arnold D., Evaluation & Decision Making for Health Services, Table 1.1 p.4. Health Administration Press, Chicago, Illinois, 1998.

The assessment of these activities may be done through the use of different mechanisms such as monitoring, case studies, survey research, experiments and quasi experiments, and time series analysis.

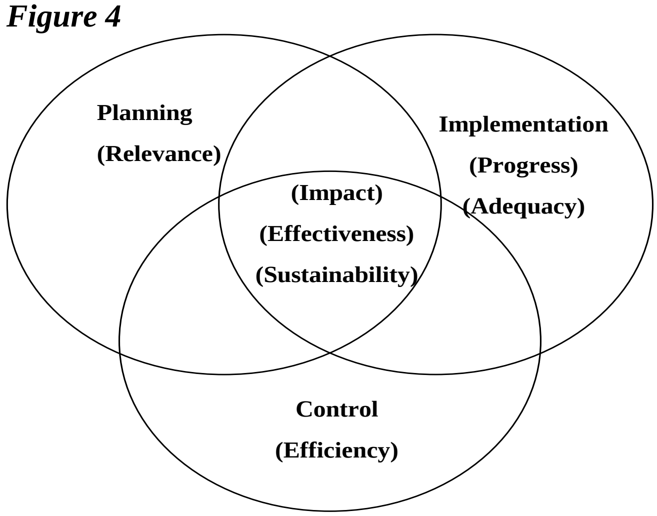
Why conduct an impact evaluation?

Information generated by impact evaluations informs decisions on whether to expand, modify or eliminate a particular policy or program and can be used in prioritizing public actions. In addition impact evaluations contribute to improve the effectiveness of policies and programs. The purpose of evaluating a project is to continuously gain knowledge of the processes and activities throughout the program in order to make better decisions within the program to meet the targeted population's needs. Evaluations may deal with issues such as adequate resource allocation and utilization (adequacy and progress), or whether the project has made any differences in the social sector (impact). Hence, evaluation aims at responding to in-depth topics such as the following:

- If the problem that was to be solved with the project still exists in the same terms as originally presented
- If the program, as originally conceived is still the best alternative to solve the problem
- If the project design, objectives, products, activities, inputs, institutional and management arrangements are still valid and coherent
- If the impact on the beneficiaries and the environment have been relevant
- If the programming and execution process has been effective
- If there are any lessons to be learned.

There are three continuous stages for a project, including the design, implementation and control. Both the methods and mechanisms of the project evaluation must be included in all three stages. The purpose is to develop a plan that meets the needs of the population, measure the progress and adequacy of the activities throughout the project and control the project by comparing the outcomes with the expected results. The following chart explains the relationship between the different project stages and the methods of evaluation previously discussed:

Figure 4



Evaluation is meaningless unless there is a clear definition of the problem to be solved and a clear understanding of the decisions to be made. When a problem is defined, a project plan along with the evaluation methods and mechanisms is needed. The project plan is developed to help solve the defined problem. The results obtained from the evaluation process are aimed at assisting project management throughout the different stages in order to help solve the defined problem.

In addition to understanding the project decisions to be made, there should be a clear understanding of the effects of these decisions. Achieving a full understanding of the effects of the MSIF interventions implies a similar understanding of the actions of the people affected by them.

The purpose of incorporating a serious effort on evaluation is two-fold. The first purpose deals with the relevance, adequacy, impact, and sustainability of the project. By keeping track of the successes and shortcomings of the program, its suitability as a model for replication to the rest of the social sector can be appraised. If successful, documentation of achievements can be useful in future discussions about replicating the project in other social programs. If some aspects are not successful, changes can be made in future design. These results are expected to be valuable in the medium to long term.

The second purpose is aimed at getting results in the short term to evaluate the progress, efficiency, and effectiveness of the project. With timely information, the project can be kept on track and changes can be made in parts where shortcomings are observed. While frequently considered part of the "monitoring" of the project rather than its evaluation, the collection of relevant information can be used to evaluate the intermediate steps in the project. Does training help in the improvement of the social care services system and it increases the beneficiary satisfaction?

The two purposes of the evaluation strategy may at times be in conflict. They will conflict where early results are used to change the policies being pursued and there is a less clean distinction between alternative policy options. However, the two goals may be pursued in combination to help managers see the ultimate results of their actions on the public, not merely on their own operations.

3.2. Alternative Methods of Evaluation (Pretest-Posttest)[2]

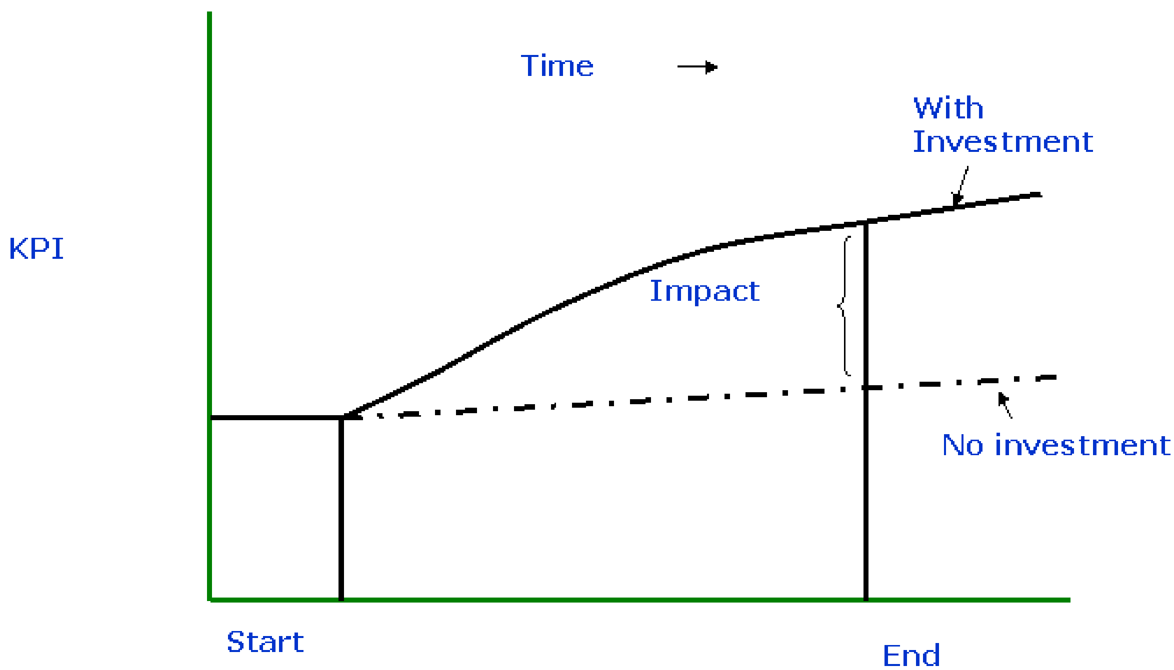
The information needed to answer the whole set of possible questions of interest is also extensive and needs to come in different forms. Some areas already have systems of data collection available as a matter of routine. Some require new means of collection; both in the form of systematic survey data collection and in the form of special, focused studies. For questions concerning reasons for changing the MSIF Project Development goals, the main tool of analysis will likely be a combination of repeated surveys, and the assessment of data for a list of indicators aimed at evaluating the impact.

[2] Veney, James E. and Kaluzny, Arnold D., Evaluation & Decision Making for Health Services, Table 1.1 p.4. Health Administration Press, Chicago, Illinois, 1998.

Rigorous analysis requires a comparison to be made between impacts with and without reform, (the status quo itself being an alternative policy choice or counterfactual). This is hard enough to do on an ex-ante basis. It is also challenging in ex-post analysis as many factors will have changed, masking reform-specific effects. The essence of reliable evaluation is to make comparisons "before and after" as well as "with and with out" the policy change or intervention strategies. The need for "before and after" comparisons means that the collection of baseline data should be done as soon as possible in order to assemble as many aspects of MSIF intervention as possible.

The following figure demonstrates how the evaluation process is used to assess the impact of the project. The figure shows how the project's results are compared with the projection, or estimation, of the results if no project intervention were carried out. The figure also shows how the baseline data is used as a starting point for measurement of project performance. The determination of the project's impact, as part of an impact evaluation, is measured as the difference between the result for an individual indicator in the communities where the project carries out interventions (activities) and the results observed in areas where no project activities are carried out. The alternative methods for measuring the impact, with and without, are described in this section.

Figure __



The following table displays a schematic of how the impact is evaluated in the context of a controlled design.

Table 3

Type of Group (Community)	**Project Start**	**Project Mid-Term**	**Final Evaluation**
Intervention	IO_1	X	IO_2
Control	CO_1		CO_2
Estimate of Impact	IO_2 - IO_{1} - (CO_2 -CO_1)		

Where:
I stands for the region/ community receiving MSIF MP project intervention
C stands for the region not receiving MSIF MPproject intervention(control group)
X represents the MSIF MP project intervention
O_1 represents observations prior to MSIF project intervention
O_2 represents observations post MSIF project intervention

In this context, we can quickly compare the impact of the project interventions (X) on the pre (O_1) and post (O_2) intervention indicators. In addition, by comparing the tracking results for the indicators in the control regions/communities with the same indicators in the intervention Regions/Communities, it is possible to observe and calculate inflation statistics.

An initial observation is made prior to any MSIF project intervention in all Regions/Communities. The data collected through this observation (O_1) is used as a baseline for comparison with data collected in subsequent observations (O_2). After the initial observation is made, project intervention (X) is introduced in the selected Regions/Communities. This intervention may consist of the entire MSIF program, or only a limited amount of the MSIF program activities. The targeting strategy that will be conducted during this preparation stage will give valuable information to decide on the intervention as well. After project implementation has been introduced, a second observation is made to assess information on the effects of the project completion. This data is then used to analyze and compare the pretest and posttest results.

The effects of the MSIF program intervention are measured by estimating the difference between the pretest and posttest results. The difference obtained for the pretest and posttest results in those Regions/communities receiving no project intervention (CO_2 - CO_1), is subtracted from the difference obtained for the pretest and posttest results in those Regions receiving MSIF project intervention (IO_2 - IO_1). This formula calculates the estimate of impact, which measures the effects caused by the MSIF project intervention.

Evaluation designs are determined by the choice of methods to identify the group of non-participants in a program or a project. They can be broadly classified into these categories:

Experimental or Randomized Control Designs

- *Randomizatio*n, in which the selection into the treatment and control groups is random within some well-defined set of people. In this case there should be no difference (in expectation) between the two groups besides the fact that the treatment group had access to the program. (There can still be differences due to sampling error; the larger the size of the treatment and control samples the less the error.)

Nonexperimental or Quasi-Experimental Designs

- *Matching methods or constructed control*s, in which one tries to pick an ideal comparison that matches the treatment group from a larger survey. The most widely used type of matching is *propensity score matchin*g, in which the comparison group is matched to the treatment group on the basis of a set of observed characteristics or by using the "propensity score" (predicted probability of participation given observed characteristics); the closer the propensity score, the better the match. A good comparison group comes from the same economic environment and was administered the same questionnaire by similarly trained interviewers as the treatment group.

- *Double difference or difference-in-differences* methods, in which one compares a treatment and comparison group (first difference) before and after a program (second difference). Comparators should be dropped when propensity scores are used and if they have scores outside the range observed for the treatment group.

- *Instrumental variables or statistical control* methods, in which one uses one or more variables that matter to participation but not to outcomes given participation. This identifies the exogenous variation in outcomes attributable to the program, recognizing that its placement is not random but purposive. The "instrumental variables" are first used to predict program participation; then one sees how the outcome indicator varies with the predicted values.

- *Reflexive comparisons*, in which a baseline survey of participants is done before the intervention and a follow-up survey is done after. The baseline provides the comparison group, and impact is measured by the change in outcome indicators before and after the intervention.

***Trend Analysis* [3]**

Trend analysis, used more as a monitoring tool, is the study and evaluation of data collected throughout the project focused on determining if the changes proposed in the Project Development goal are directly caused by the project implementation, or if some external cause had influence in the changes observed. This method analyses trends in the different indicators used to measure the performance of the project, and aims at answering the following:

- If changes are a measure of performance
- If project intervention somehow caused the changes occur
- If changes are as expected, or are the results obtained outside the expected range
- If there are additional causes for the changes observed other than the implementation of the project

The main purpose of trend analysis is to clarify the main causes for the observed changes. It tends to focus on the impact of the project and the project effects. It is concerned with the long run outcomes of the project, and if these outcomes are a direct response to the project implementation. Trend analysis also focuses on determining if the obtained outcomes are valid.

4.4 Determining the Source of Data

The approach you choose for your study should reflect the kind of information you want to gather. That data, in turn, should be based on the objectives you identified in your strategic plan. If you are looking for percentages and averages, you should use quantitative research techniques.
If you prefer to focus on individual case studies, qualitative techniques will be required.

Mixing quantitative and qualitative research methods is often thought of as mixing oil and water. Some believe they do not blend. Others, however, see the value in complimenting attitudes with statistics and augmenting opinions with numbers. The following table compares quantitative and qualitative approaches to data collection for M&E.

[3] Veney, James E. and Kaluzny, Arnold D., Evaluation & Decision Making for Health Services, Table 1.1 p.4. Health Administration Press, Chicago, Illinois, 1998.

<table>
<tr><th>QUALITATIVE RESEARCH</th><th>QUANTITATIVE RESEARCH</th></tr>
<tr><td>QUALITATIVE RESEARCH is a method of information gathering that conveys feeling or insights. It is based on a small sample, usually no greater than 30 people, and thus, is too small to draw valid conclusions about the opinions of an entire target population. It mainly uses observation and unstructured interviews to uncover meanings and insights to problem and issues.
It is used to:
Generate hypotheses
·Clarify issues prior to undertaking quantitative studies
Assess citizen perceptions of a public utility or service provider
Examine emotional responses of citizens to interaction with public service agency and/or agent</td><td>QUANTITATIVE RESEARCH is based on statistical principles. It uses sampling methods, questionnaires, and computer based data processing to answer questions of how much, who, where and when. It tends to be more expensive and time-consuming than qualitative research, but provides a certain degree of reliability.
It is used to:
Establish the level of citizen satisfaction or
dissatisfaction with public service providers
Evaluate the impact of project interventions on beneficiaries in terms of access, efficiency and results
Propose options and reform with the weight of quantitative backing</td></tr>
</table>

Increasingly, M&E systems combine quantitative evaluation with qualitative techniques that allow managers and stakeholders to carry out a more comprehensive evaluation of the project's key results. The following items summarize the available technique in each area.

Quantitative Techniques

The collection of data using quantitative technique will focus on two main dimensions. The first is related to the collection of statistical data derived from official sources and the ongoing implementation of the project. The second is related to the application of beneficiary impact assessment surveys, through other household surveys, exit polls or alternative survey techniques.

Basic survey research (questionnaires) is usually accompanied by some form of probability sampling when an entire population cannot be measured. With marginal resources available in both time and money, developing a small but representative data base on a specific problem can serve the interests of your city or community well. One alternative that has been found to be highly successful in these contexts is known as Lot Quality Assurance Sampling (see the following section and annex 5 for greater detail).

This systematic statistical sampling procedure reinforces rigor in the data collection approach. Such rigor is critical because in the world of policy, numbers are often given more importance than opinions. The survey method can also highlight the quantitative estimates between a problem and its possible causal factors through frequency distributions and regression analysis. Once a problem's size and dimensions are identified (via the findings from the survey), researchers can begin to look at which factors are most closely related to that problem.

Qualitative Techniques

The information from qualitative methods is usually derived from three main sources. The first source would be through the development of focus groups. This research method will provide managers and stakeholders with a comprehensive, qualitative, view of the impact on beneficiaries. The second is through the application of direct interviews with beneficiaries. The third is through the stakeholder participation workshops or 'large focus groups'.

Surveys using a Lot Quality Assurance Survey (LQAS) [4]

As described above, one of the alternatives for collecting quantitative data is the LQAS system. The problems with data quality and availability in Moldova point to the need for primary data collection methods in order to ensure that the monitoring and evaluation system is based on quality data. Typically the high cost of household surveys makes them a tool with limited applicability in resource poor environments and thus it is important to define alternative data collection methods that are rapid and effective. One of the more successful tools for M&E has been shown to be the Lot Quality Assurance Sampling (LQAS). This section describes the tools as potential solution to the problem of data collection.

Lot Quality Assurance Sampling is an evaluation method that was developed during the 1920's to collect and analyze information on industry commodities. and has been recently adapted for example: in health system evaluations. LQAS is a rapid, precise, and inexpensive method of assessing the quality of health services in developing nations. Its focus is to identify areas that have acceptable levels of health versus those that are performing below expectations. LQAS may focus on measuring health levels of coverage, quality, efficiency, effectiveness, among other aspects. For simplicity, the following explanation will be based on measuring health coverage using LQAS methodology.

The basic principles of LQAS concentrate on dividing the target population into small, administrative, and meaningful groups (Regions), and randomly choose a small sample of each to survey. This method provides managers with sufficient information to base decisions made on the health system, by collecting data on small samples from each target population division (Region).

[4] Valadez, Joseph J. Assessing Child Survival Programs in Developing Countries, Testing Lot Quality Assurance Sampling. Department of Population and International Health, Harvard School of Public Health. Distributed by Harvard University Press, December 1991.

Judgment on which sectors have adequate or inadequate health coverage levels is based on the decision rule. The decision rule is the maximum number of undesirable observations a Region is allowed to have. This decision rule is based on the upper and lower thresholds established by the health system. The upper threshold is defined as the minimum amount of desirable observations a Region needs to have to be classified as having adequate health coverage, and the lower threshold is the maximum amount of undesirable observations a Region needs to have to be classified as having inadequate health coverage. If a Region has satisfactory health coverage it means it is receiving the adequate resources to provide health services to its population and there is no need for additional, immediate investment on its health facilities. Conversely, if a Region has unsatisfactory health coverage it means that it needs priority attention for improvement on the areas measured.

A sample size of 19 households would be used to survey the population of the each targeted Regions in Moldova, including the pilot and control groups. This survey interviews 19 men and 19 women randomly selected in each Region. The sample size of 19 households will be selected based on the thresholds and the misclassification risk percentage established. With these factors established the LQAS theory indicates the appropriate sample size to be used, in this case 19.

The sample size of 19 households limits the misclassification risks to less than 10 percent for each indicator measured. If a smaller sample size had been used, the misclassification risk increases, whereas the precision on estimates and efficiency of the method increases by an insignificant amount when the sample size is increased. While this may be a margin of error that is larger than optimal for scientific research it is more than sufficient for M&E level.

4. Implementing a M&E System for MSIF

This section outlines the main elements that are proposed for the design and implementation of the M&E system. The section first addresses how results will be monitored and evaluated in general terms. The section the proceeds to define the key indicators selected, define the data source and collection timing for key indicators, outline the proposed process for collecting baseline data, establish mechanisms for quality control, outline reporting and data flow issues and finally highlight the mechanisms for lessons learned and continuous feedback.

4.1 The General Framework

The M&E system provides the overarching framework to monitor and evaluate MSIF performance throughout the implementation of the project. The framework is based on the logical framework for the project which links the project's development objective with specific objectives and then with the inputs, outputs and outcomes achieved in each of the components. The general framework is displayed in the following figure.

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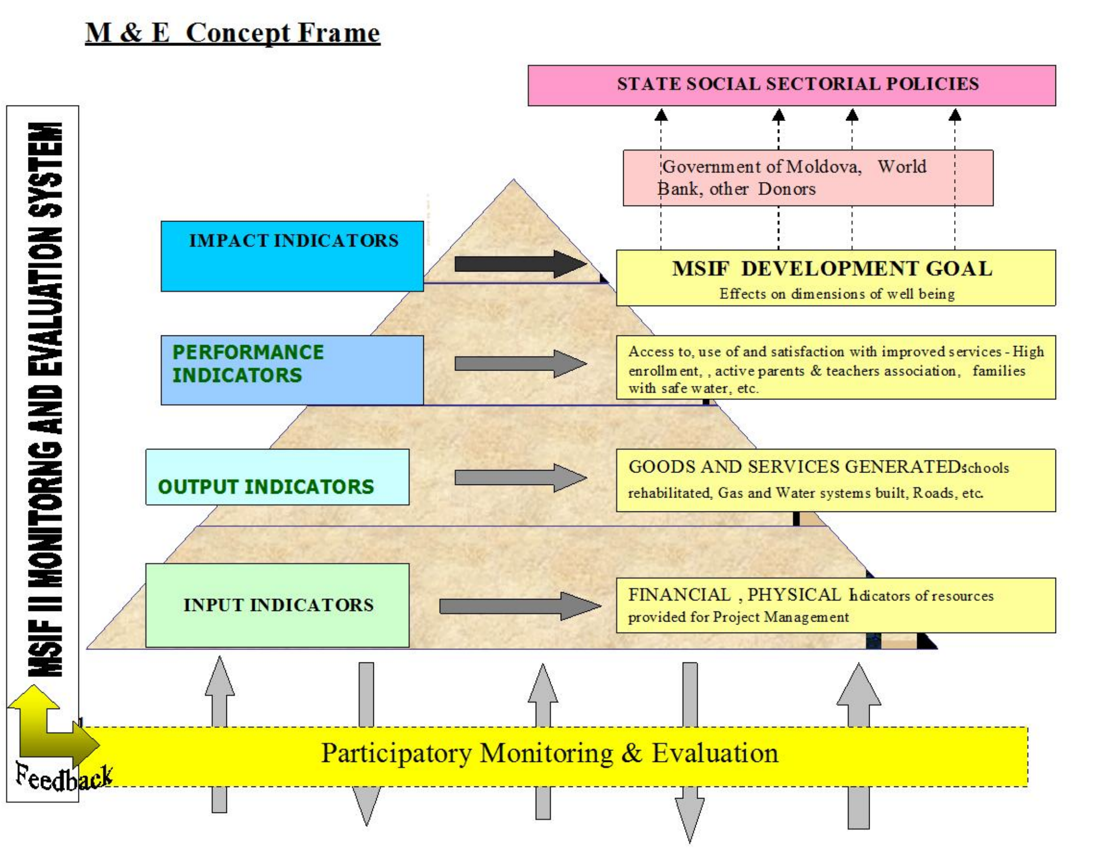
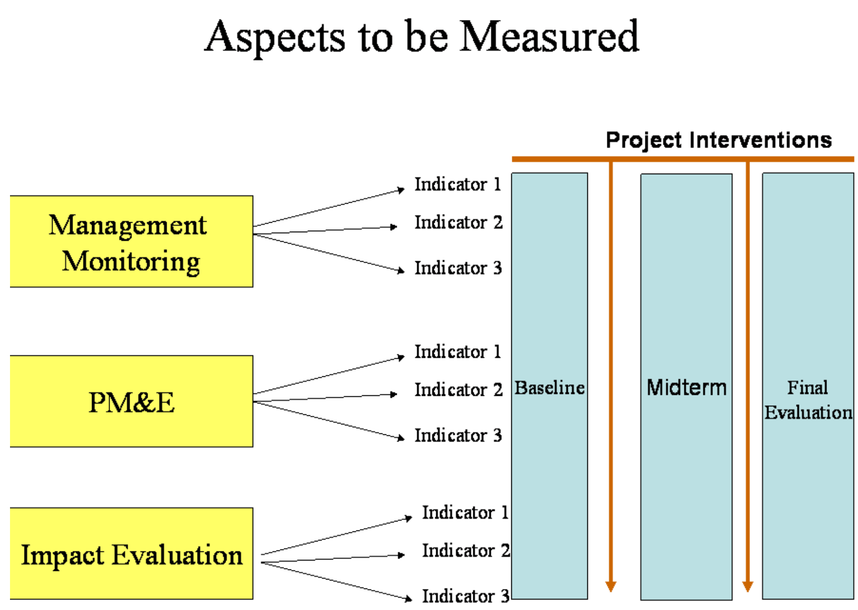


The general concept for the implementation of the M&E system has three main levels. Each of these levels contributes to the collection and management of indicators which are critical for implementation of the M&E system. The three levels that are included in the system are:

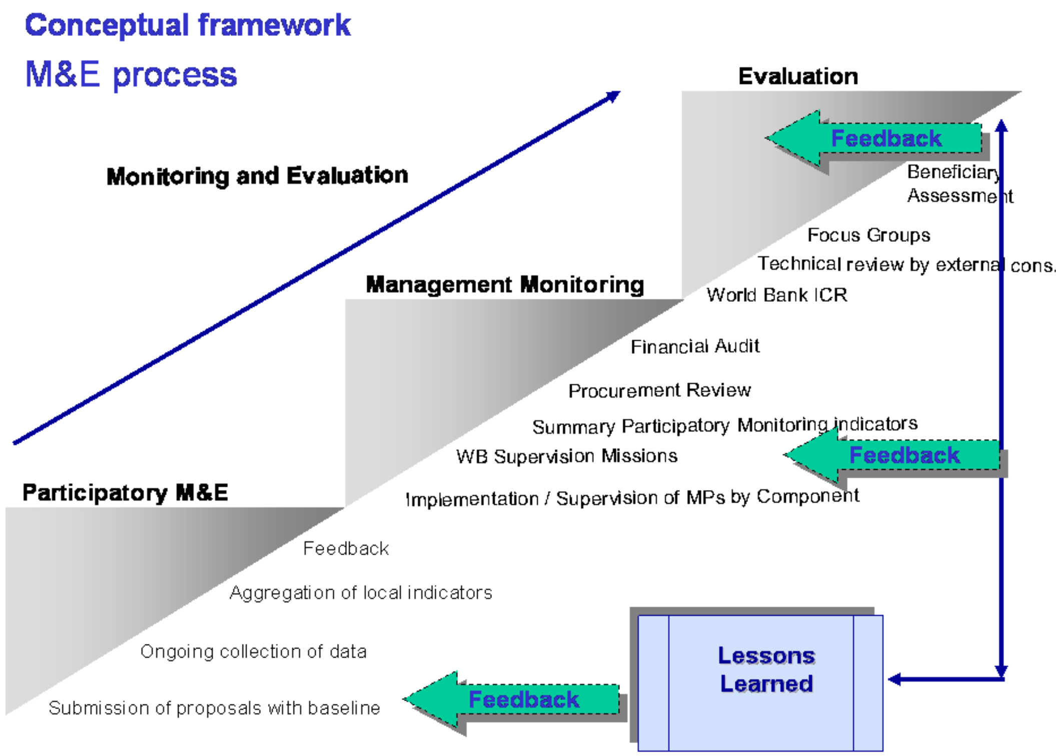
- Management input/output indicators on financial and administrative issues related to the project, on the key input/output indicators by component.
- The Participatory M&E system which provides indicators based on the reporting of information at the local level.
- The information for evaluation of the project's impact.

In each of these three areas, the monitoring and evaluation system establishes a set of key performance indicators (KPIs) which will be used to evaluate the project's performance. These KPIs will be monitored on an ongoing basis and will be the basis for evaluating the project's performance over time—at the mid-term and final evaluation. The general scheme is outlined in the following graphic.

Figure 5



While the above figures outlines the key moments when evaluations will be carried out, the ongoing monitoring which is part of the Management Monitoring and the PME will be a continuous element of the M&E system. The following figure displays the integrated conceptual framework for the M&E system.



As displayed in the above framework, the ME system will be based on a collective set of information, with diverse sources. The key elements for each area include:

Participatory M&E:

- Baseline data submitted as part of the MP submission procedure
- Data collection and submission by the CBO, with assistance of the facilitators/service organizations
- Aggregation of indicators from the PME by project typology and region
- Feedback and lessons learned obtained through the focus groups and LL processes.

Management Monitoring:

- Procurement data on inputs and outputs
- Regularly submitted data from component coordinators, including MP monitoring
- Financial Management Reports (FMRs) submitted to the World Bank
- Project Management Reports (PMRs) regularly submitted to the World Bank
- Feedback from World Bank supervision reports
- Results from Annual Financial Audit
- Results from Procurement Reviews
- Special management reports

Evaluation:

- Beneficiary Impact Assessments (baseline, mid-term and final)
- Focus Groups
- Impact evaluations carried out by external, national and international, consultants or research groups.
- Technical reviews by external consultants
- World Bank Implementation Completion Report (ICR)

4.2 Defining Indicators for M&E

The design of an effective M&E system depends on the selection of quality indicators, the development of institutional capacity to collect the indicators, the availability of budget to enable continuous application of the M&E system and high quality analysis of the information. This section describes the key aspects related to the definition of indicators, proposes a potential set of indicators and outlines the reporting formats that will be used to manage indicators.

Selection of Indicators

An indicator is a factor or variable that enables any project/program to:

- Measure achievement or progress towards targets or goals
- Note changes connected to the project
- Assess the performance of the project

The type of indicators needed to monitor, and later evaluate, varies greatly from project to project. However, when the MSIF starts exploring what project elements it might measure, it may come up with too many indicators rather than too few. It is impossible to measure all the things that one would like to know about a project, and it may not be useful to do so – perhaps a few indicators suffice to provide the key information needed and finally, collecting data is very costly. Therefore, a key task is the selection of which indicators to use. There is no rule for how many key impact indicators one should have although more than three and less than twenty is considered reasonable. Key indicators may need to be adapted as the project develops.

Good indicators should follow the **SMART** approach indicating that each indicator is:

- **S**pecific (Precise and unambiguous)
- **M**easurable (Must be amenable to independent validation)
- **A**dequate (Must provide a sufficient basis to assess performance)
- **R**elevant (Appropriate to subject at hand)
- **T**rackable (Available at reasonable cost)

In addition, good indicators should:

- Enable the MSIF team and outside observers to tell whether the project succeeded or failed;
- Enable progress follow-up;
- Measure whether the intended outcome for the target population was reached;
- Be meaningful (does this data really tell me what I need to know?)
- Be powerful (do not add another indicator unless it adds significant information!);
- Be cost-effective (does the value of this data justify the costs of its collection?)

List of Tentative Indicators

As previously stated, the purpose of indicators is to help provide a comprehensive assessment of the performance of the MSIF programs across the range of its activity, including services that will be provided alongside social care services. A list of indicators has been prepared after several workshops in coordination with the PM & E Consultant and the MSIF staff. The proposed list has been developed as a tentative list that needs further fine-tuning. The Key Performance Indicators are organized into five main groups, reflecting the main dimension that the project will address:

- **People** outlining the principal effects of the project on the beneficiaries
- **Finance** highlighting the project's key financial results
- **Works** includes indicators on the completion of key works
- **Training** provides data on the strengthening of human capacity
- **Process and Results** includes indicators to measure the overall impact of the project in terms of key processes and results

In each of the above areas, the Key Performance Indicators that have been defined include:

People:

- Total number of beneficiaries by typology
    - Children at risk (<18 years)
    - Disabled children < 18 years
    - People with disabilities > 18 years
    - Women
    - Retired people/Elderly
- # People participating in project preparation, implementation or evaluation (MSIF staff, implementing agency, local public administration, CBO, NGOs, contractors, design companies, local supervisors, trainers, facilitators, etc.)
- # of people participating in the decision-making process

- % of community based CBO functioning 2 years after project closed (registered and non registered)
- Total number of members of CBOs
- Total number of registered CBO as a share of the total number of created CBO
- % of beneficiaries satisfied or very satisfied with quality of MPs
- % of the population that expresses a favorable opinion of the MSIF II Project
- Average # of beneficiaries per MP
- % of beneficiaries from targeted groups (small cities, rural populations, disabled, etc.) by typology
- Employment generation by gender:
- # of jobs generated (temporary and permanent). Measure temporary in man days.
- # of jobs generated (direct and indirect)
- % of jobs generated that are local level (in community)

Finance:

- Total Amount of contributions from community level
- % of total project amount financed by community
- Total Disbursements by category
- Actual Disbursements as share of total planned disbursements
- Expenditure by component and typology
- Project Administration + Overhead as a share of total expenditure
- Total Expenditures as a share of approved budget by component
- Average cost per type of projects per beneficiary
- Contract cost as a share of estimated cost
- Final cost as a share of contract cost
- % of MPs delayed during implementation
- Operational expenses of social care projects as share of total planned operational expenditures
- Operational expenses of social care projects as a share of total investment costs
- Programming cost (furniture, equipment, training and TA) as a share of total investment cost
- Expenditure on environmental component as a share of total MP costs by typology
- Total incremental investment by communities in communities where a MP was implemented in last 2 years (after 1 MP finished) by typology
- Total incremental investment by communities as a share of total MSIF investment in last 2 years (after 1 MP finished) by typology

Works:

- Expenditures on works completed as a share of planned expenditures on works

- Expenditures on social service programming costs completed as a share of planned social service programming costs by typology
- # of new created services by type and region
- # of new constructions by typology
- # of rehabilitated infrastructure in targeted areas by MP type
- # of new household gas connections
- # of household water systems connections
- # of kilometers of pipelines water/gas/irrigation
- # of kilometers constructed roads
- MPs extended as a share of total MPs
- % extension of work as a share of total MP work implemented

Training:

- # of training by type, topic and targeted groups
- # of person days of training by type of training and targeted groups
- # of technical assistance consultations provided
- % of people satisfied with training activities

Processes and Results:

- Total number and % of houses that have connection to safe water
- Total number and % of beneficiaries with access to safe water
- % of Water and Sanitation Projects that include a component of Information, Education and Communication on personal hygiene
- Total number of children long-term institutionalized in targeted areas
    - No. of children benefiting from social care services within the Center
    - No. of children benefiting periodically from social care services within the Center
    - No. of children benefiting from social care services on outreach approach
- Total number of beneficiaries from social care services from targeted groups
- Number and % of Vulnerable Persons from targeted areas
- # of Social Care Centers active by type of service to total no. of services created
- Total number of children abandoned
- Modernization of legal framework on social assistance
- % of decrease in the number of respiratory diseases among school children ('000 population)
- Incidence of intestinal infections ('000 population) in MP Communities
- Proportion of households connected to sewerage system
- % of houses with sewerage systems
- Net enrollment rate primary school
- Drop out rate from secondary school
- % of houses with heating systems other than wood burning

As previously stated, the purpose of indicators is to help provide a comprehensive assessment of the performance of the MSIF across the range of its activities. The previous list of indicators was developed with the intention to improve the M & E quantitative and qualitative data analysis for better decision making. In order to achieve these goals, data for the indicators needs to be collected by Region/ rayon/community (PM & E), thus allowing comparison between the communities with MSIF intervention and those that will not have.

In addition to this a separate report, shown as annex 3, is presented indicating the program goal, indicator, the frequency of collection, the source and who is responsible for collection. In the integrated information system all of this data would be available in an integrated table available for each indicator or in these two standardized reporting formats.

These dimensions are reflected in the following technical specification template that will be developed for each indicator. The full technical specifications for all impact related Key Performance Indicators will be provided as an annex. The following example is provided to show how the template for each KPI will appear.

Table 4

Infrastructure Micro Project

Water System: Construction / Rehabilitation of Water Systems Accessibility to improved drinking water sources prevents the incidence of diarrhea and other intestinal infections and improves the general living conditions.	
Percentage of Households with water system connections and receiving service	
PURPOSE	To asses progress in the coverage increase of access to safe water in the poorest villages of the North Region.
APPLICABILITY	All North Region Rayons with least human development indicators and lower %of access to water (MSIF II targeting strategy)
FREQUENCY	At the Midterm and after finalization of the MSIF II
MEASUREMENT TOOL	PM & E , M & E
METHOD OF MEASUREMENT	PM & E Monitoring Report/Beneficiary assessment/Impact Evaluation
INTERPRETATION	The indicator demonstrates the increased % of households with safe water as a result of MSIF II intervention.
AVAILABILITY	Yes / No

[1]: The number of households with water systems which currently receive the service: **A +B – C**, where

A= number of households with service before MPs implementation

B= number of households with service after MPs implementation

C= number of household which don't have access to safe water

4.3 Data Sources and Timing

In order to ensure timely collection of the data for each of the indicators listed in the previous section, the M&E system must establish a clear process of data collection. This includes the identification of the source for each indicator and the timing with which it will be collected. Annex 1 lists each indicator and the estimated source of data. Annex 3 outlines the frequency with which each indicator should be collected.

Both secondary and primary data will be used to monitor and evaluate the MSIF Project. The sources of this data include the following:

- MSIF Project Management Reports
- Department of Statistics and Sociology
- Line Ministries
- Beneficiary assessment
- Impact evaluation
- Focus Groups
- Surveys
- PM & E Monitoring Reports

The implementation of the MSIF M&E system would use all of these sources of data to formulate the key performance indicators and to carry out the performance based monitoring and evaluation framework. Annex 1 describes the source of data, for each respective indicator, that will be used to feed the M&E system. The following table describes the timing for each of the above mentioned data sources.

Table : Data Sources and Timing

Source	**Timing for utilization**
MSIF Project Management Reports	These will provide information on a monthly basis regarding project implementation, financial execution and principal outputs
Department of Statistics and Sociology	Official source of data for many of the impact indicators. Data will be collected at the rayon, or community level if available, on a yearly basis
Line Ministries	Data may be collected annually from the government line ministries that are involved in data collection for specific areas, including *inter alia:* health, education, environment, transport and works.
Beneficiary assessment	Beneficiary assessments should be carried out prior to initiation (baseline), at mid-term and at the end of the project
Impact evaluation	Impact evaluation should be carried out by external consultants, local and international, at the mid-term and end of the project. As part of baseline process, some indicators may also be collected.
Focus Groups	Focus groups should be carried out at least 1 per year.
Surveys	Special surveys will be carried out by the communities and to collect to be determined information. This could include the LQAS or traditional household survey methods
PM & E Monitoring Reports	The PME reports will generate much of the data that is required for the ME system. This information will be reported prior to starting each MP, after 6 months and yearly for 2 years following project implementation.

4.4. Data Collection

Once a decision has been made about what to measure, a coherent plan must be made. This plan foresees all necessary indicators and takes into account all major data collection efforts within the country, leading to the most efficient use of resources in data collection. Household surveys and Beneficiary assessment also provide information on the impact of the MSIF interventions.

It is possible to define two dimensions regarding the issue of data collection. The first dimension is related to the collection of baseline data on the key performance indicators that have been defined to measure the project's performance. The second dimension is related to the ongoing efforts to collect data to maintain the M&E database current. Each of these dimensions is discussed below.

Baseline data collection. In order to evaluate the Moldovan MSIF and to analyze the observed changes, baseline data must be collected to compare before and after results of the project implementation. The baseline consists of a list of indicators used to measure the MSIF. The baseline data is gathered before the project is implemented in order to have a control list of indicator results, and thus be able to observe and analyze changes in the social care services sector throughout the project implementation. For this project, the baseline data will be collected at national level to allow for continuous monitoring of the project's impact and at the regional/rayon and (communities) where available.

It is important to note that there are three types of baseline information to be collected under the system.

- The data that comes from existing data sources, such as the Department of Statistics, which provides basic data on impact indicators. Some impact indicators may be presented from specific surveys (BIA and others) that were carried out in the context of MSIF I.
- Indicators presented as the mandatory baseline data which is presented in the PM&E framework by each community in its micro-project application.
- Indicators which must be presented with each MP proposal as mandatory within the PM & E Monitoring report.

In order to evaluate the Moldova Social Investment Fund Project and analyze the observed changes, baseline data must be collected to compare before and after results of the project implementation. The baseline consists of a list of indicators used to measure the project's performance. The baseline data is gathered before the project is implemented in order to have a control list of indicator results, and thus be able to observe and analyze changes in the achievement of the MSIF development goal throughout the project implementation.

The framework to be used for the evaluation consists of comparing those communities that have received resources and support from the project with those that have not received any intervention from the Social Investment Fund Project. In this sense, the identification of control areas would provide a perfect evaluation tool. While there are some methodological considerations that need to be finalized, we propose the following alternatives for control groups.

- The communities will be divided into those communities that are targeted (pending the targeting strategy) and those that are not targeted. We propose that from the non-targeted communities, that five types of communities are defined as comparators with a similar grouping of five intervention communities. While this would introduce some bias due the possibility of comparing targeted with non-targeted, it is likely that this bias can be adjusted for in the analysis. The difference between targeted and non-targeted should not be that great in terms of general characteristics and current levels. More importantly, the control group serves as a comparison regarding trends and even if the initial level of a give indicator in the non-targeted areas were considerably higher than the targeted area, observing the generic changes in the indicator in each area would allow us to draw conclusions regarding endogenous (intervention) and exogenous (general environment) influences on the changes in the metric. The proposed typology is outlined below[5].
    - Villages with fewer than 500 inhabitants
    - Villages with between 500 and 1800 inhabitants
    - Villages with more that 1800 inhabitants
    - Towns with fewer than 10,000 inhabitants
    - Towns with more than 10,000 inhabitants

- A baseline beneficiary assessment is done prior to project commencement, then a mid-term and a final beneficiary assessment are carried which could be used to evaluate the impact of the project. The baseline would substitute, to some extent, the experimental design of with and without.

- If resources are not available for 2, then we could forego the control groups and the baseline assessment and make the evaluation based uniquely on the comparison of baseline data with outcome data.

[5] This will be further reviewed with the Poverty Targeting Specialist to refine stratification: small poorer villages, small non-poor (less poor) villages, large poor villages and large less poor villages.

- Finally, we could collect baseline data across the country for the main impact indicators, at the rayon level. We could then look at average changes across rayons, later highlighting those rayons where there is no or only limited interventions to compare the "with" and "without" project results.

Ongoing efforts to collect M&E data. The true test of the M&E system is the ongoing collection and use of data to measure program performance. This will depend on the continued support and efforts by Social Investment Fund and the pre- established source of information to sustain the M&E system. The M&E system will act as a clearinghouse for both generating and disseminating data. A formal mechanism for screening data collection efforts can ensure that whatever is collected best meets the M&E needs. In general, every extra layer of bureaucracy carries with it the potential for unnecessary delays. The "clearinghouse" function should not be viewed as an approval process. Rather, it should be a registration and rapid review mechanism that ensures that the MSIF is aware of all data collection efforts that could contribute to its needs. This is especially useful in countries where responsibility for data collection has devolved to the provincial or district level.

A centralized database or library of all MSIF-related data collection contributes immensely to the efficiency of M&E efforts. What has already been done should be noted and tracked to avoid duplicating studies unnecessarily, baseline studies, academic research and project evaluation reports should all be centrally filed and universally available. (Tracking and accessing evaluation reports are the most problematic, since many government agencies, NGOs and donor agencies involved in programming are reluctant to share evaluation reports, especially if the project in question has achieved less than spectacular results.) The database should list ongoing data collection efforts as well as those already existing, to avoid the duplication of studies before their results are published. It is also exceptionally useful to keep a record of research protocols and questionnaires so that they can be repeated to maintain consistency between populations and over time.

4.5 Controlling quality in M&E

Ensuring that the data provided as a source for the M&E system is of primary importance to the success of the M&E system. In order to ensure data quality, we propose three measures are carried out:

- The use of triangularization of results, combining reported results from PM&E or from national statistics, with impact assessments and focus groups to ensure that results are of the highest quality;
- The use of service organizations to supervise the collection and input of data into the system. These organizations would assist the communities with the

collection of data for the PM&E system and would provide broad oversight on the quality of the data; and

- The use of spot audits of the data submitted by the PM&E system. By randomly selecting 10 percent of all micro projects and reviewing the data submitted, at the source, the M&E system would provide a final data control mechanism.
- Using motivations (stick and carrot tools) for PME

4.6 Defining Reporting Requirements

The utilization of the M&E system will depend heavily on the reporting mechanisms that are used by the system. The following table outlines the reporting requirements of the M&E system, describing the purpose and type of information reported, the type of M&E report and who is responsible for data collection and processing. The specific reports for each level will be presented in the operational manual.

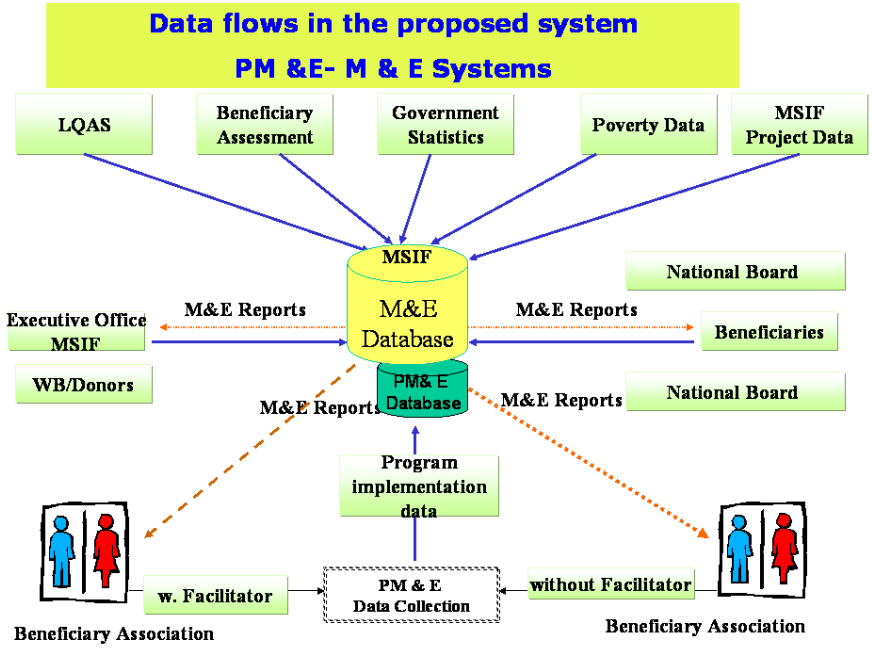
Reporting requirements

To	Description	M & E Reports	Responsible staff
National Board (NB) Donors/Bank	Advise on policy and institutional Approval of targeting strategy; Approval of annual work program and budget.	• Executive M & E report • M & E Performance Report • Financial Reports • MP Portfolio Report by component/typology/ by MP stage • Lessons Learned Report	ED M & E ED/ M & E FAD/ED ED- M & E
Executive Office (ED)	Responsible for the management and coordination of all MSIF activities.Provides progress and semiannual and annual financial reports to the National Board, the World Bank and other donors..	• Executive M & E report • M & E Performance Report • Financial Reports MP Portfolio Report by component/typology/ by MP stage • Lessons Learned Report • Community Contribution • Procurement Report • Beneficiary assessment/impact evaluations	M & E M & E FAD Procurement Spec. M & E
Executive Committee (EC)	The Executive Committee holds weekly/biweekly meetings makes major decisions on the MSIF operations and approve	• Executive M & E report • M & E Performance Report • Register of proposals • Financial Reports	M& E M & E FAD M & E Procurement Spec.

	MPs submitted to the MSIF.	• Community Contribution • Lessons Learned Report • Procurement Report • Beneficiary assessment/impact evaluations	M& E
Director of Finance and Administration Department (FAD)	is responsible for accounting and general administration and is required to present semiannual and annual financial reports to the NB, World Bank and other donors	• Financial Reports • Community Contribution • M & E Performance Report	FAD M & E
Director of Monitoring and Management Information System Department (MIS- M & E)	Responsible to administer MIS and M & E system reporting.	MIS reports MPs reports • Executive M & E report M & E Performance Report	MISD MISD M & E
Director of Microproject Department (MPD)	Ensuring proper design of MPS, appraisal and supervision of construction works; ensuring microproject sustainability, provision of technical assistance	Financial Reports Executive M & E report M & E Performance Report MP Portfolio Report by component/typology/ by MP stage Lessons Learned Report Community Contribution	FAD M & E M & E FAD
Director of the Community Development Department PCCD	Promotion and appraisal and follow up of the Social Care Services, Communication and evaluation of capacity building.	• Financial Reports • Executive M & E report M & E Performance Report • MP Portfolio Report by component/typology/ by MP stage • Lessons Learned Report Community Contribution	FAD M & E M & E FAD
Procurement unit		•	
Social Care Services unit		•	

4.7 Analysis of the Flow of Information in the System

The flow of data in the system needs to be designed to maximize the utilization of the existing systems and to minimize the need to re-input data, thereby reducing transaction costs and streamlining business process. The system needs to be designed to capture and store information from the main sources required for an integrated M&E system. The following figure shows the principal sources of information and the principal users of the system, including the flow of information amongst the parties.

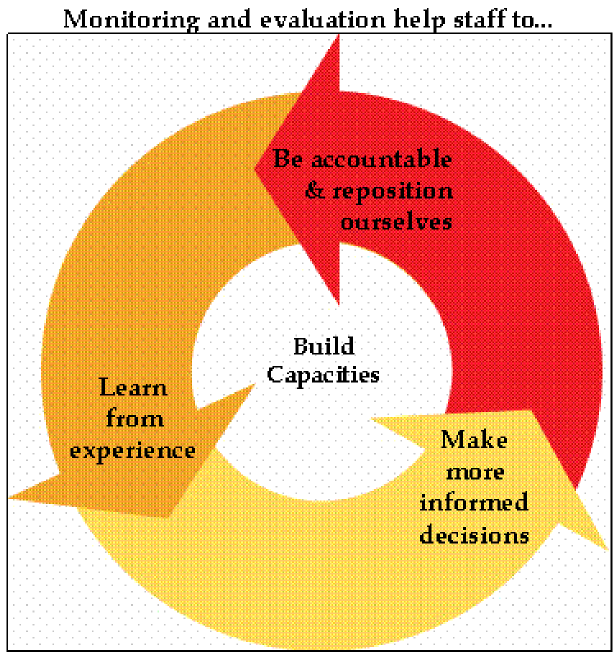


4.8 *Capturing Lessons Learned*

The MSIF project implementing team, including central PCU, facilitators and CBOs need to use information and evaluative evidence effectively in order to manage development processes and to achieve results. Success is based on the premise that development practitioners learn from what worked—and did not work—in order to ensure better progress towards results and better results. **Learning** has been described as a continuous, dynamic process of investigation where the key elements are experience, knowledge, access and relevance. It requires a culture of inquiry and investigation, rather than one of response and reporting. This is more easily accomplished when people are given the chance to observe, engage in, and invent or discover strategies for dealing with particular types of problems or development issues. **Knowledge** is content- and context-specific information capable of bringing change or more effective actions at a wider level that can contribute to new learning and knowledge.

The management of knowledge involves creating, sharing and leveraging knowledge that not only requires establishing systems and processes to gather, organize, package and disseminate information on time to the right decision makers, but also conducting assessments of the processes. Information gained from the processes may be described as feedback. The following figure highlights the key aspects related to lessons learned, in the context of the M&E objectives.

FIGURE 1. OBJECTIVES OF MONITORING AND EVALUATION



Evaluative evidence helps us to use information generated from experience to influence the way in which appropriate policies and programs are developed, or the way in which projects are managed. Evaluative evidence refers to information or data indicating qualitative and quantitative values of development processes, outcomes and impact, derived from multiple sources of information and compiled in an evaluation exercise. Evaluative evidence is based on:

- The explanation of causal links in interventions and their effect;
- Analysis from close-up, detailed observation of the development context by the investigator(s), which is part of empirical evidence;
- Analysis from research and review and other documents (secondary sources) relevant to the development context;
- The attempt to avoid any preconceptions in the assessment.

Evaluative evidence does not, however, always include direct, detailed observations as a source of evidence. Good evaluations are empirically based. Empirical evidence is verifiable information based on observation or experience rather than conjecture, theory or logic. Empirical evidence is designed to reflect:

- Validity of conceptual ideas or issues;
- Consistency in trends or patterns;
- Factors contributing to actual outcome(s) and impacts.

While monitoring helps to provide initial lessons specific to the outcome, program or project, evaluation is aimed at extracting lessons from experience in such a way that both generic and specific issues are identified and alternative solutions are developed.

Implicit in Results Based Management (RBM) is continuous planning/implementation/monitoring/evaluation for managing results and learning from experience. This requires more interaction among stakeholders and institutions around results. It also requires the use of communication and reporting mechanisms to reflect learning and facilitate the flow of knowledge, information and resources.

The proposed knowledge management strategy points towards a number of emerging principles to enhance learning, as noted in Box 1. These principles imply the optimal use of monitoring and evaluation tools to establish reference points that help management to achieve effectiveness at two levels. One level is that of development effectiveness, which encompasses the results (outputs, outcomes and impact) of assistance. The other level is that of organizational effectiveness, which refers to the organizational standards of performance.

BOX 1. KEY PRINCIPLES OF LEARNING

- Help others actively interpret—rather than record—information so they can construct new knowledge for themselves;
- Use timely, effective and innovative

Feedback from Monitoring and Evaluation

The major challenge in monitoring is to gather, store and use information that serves different levels of assessment. Monitoring should be multifunctional so that information generated at one level is useful at the next. Monitoring should also go beyond checking whether events are taking place as planned. The quality of the two-way flow of information at the country level between the project staff and the program staff must be regularly investigated.

The same is true for the flow of information within the PCU among program staff engaged in managing different programs and monitoring the outputs produced by projects and their effect on outcomes. This can be achieved through periodic interviews, review of annual and other program and project reports, and independent observation of events. The monitoring process should be committed to improving the lateral linkages among project and program staff, including feedback processes, for learning purposes. Analysis of the existing or possible linkages across programs and projects should be as critical, objective and exhaustive as possible. Managers must be involved in the entire monitoring process. Evaluation is a process-oriented exercise that requires establishing common baseline data for making comparisons. The problem is knowing from the outset every factor that is relevant and how all factors affect each other. Before any evaluation, take the following steps:

- Agree on the priority issues demanding information. Secure agreement on those issues that most urgently require information to make the most of the resources available for information management, which tend to be limited and complex. A high degree of consultation is required during the agreement process since stakeholders may have widely differing views on priorities.
- A draft list of priority issues could be prepared and distributed to stakeholders for comment. Alternatively, a workshop or other discussion forum could be held specifically to reach consensus. Reconciling different viewpoints by negotiating a consensus on priority issues can help build ties between stakeholders and facilitate cooperation.
- Determine the information needs of decision-making groups. The key to effective use of information is to focus only on essential information. Ask decision makers to articulate their needs directly before embarking on an evaluation. A thorough assessment of information needs is a critical initial step. One of the most efficient ways of arriving at transferable information (lessons) is through outcome evaluations, the sharing of which can facilitate learning across different countries and geographical locations.

The Feedback Process

The feedback process for MSIF when undertaking monitoring and evaluation should follows some basic steps:

1. Ensure a Focus on Results

- Elaborate projects and programs based on intended outcomes;

- Establish what evidence is being sought, what variations can be anticipated, and what should be done if such variations occur (i.e., what would constitute supportive or contrary evidence for any given project or program);
- Define, for each staff level and partners, the purpose for generating knowledge or decision-making information and its scope;
- Define monitoring priorities oriented to outputs and outcomes and have reference points or standards against which judgments can be made about feedback;
- Select knowledge and information indicators based on corporate priorities, use and user;
- Be cost-effective in regards to the level of resources applied and identify key evaluation resource requirements in future programming;
- Incorporate a timescale covering future changes in programming;
- Agree on the system to collect and analyze data, and allocate responsibility and costs; Scan qualitative information to improve the application of certain monitoring and evaluation techniques such as field-checking of assumptions, better framing of questions or issues, and more astute choice of assessment areas;
- Monitor learning processes, including the use of feedback and knowledge products.

2. Ask Questions

- Constantly inquire, through feedback mechanisms, about why events appear to have happened or to be happening in projects and programs;
- Identify the extent of the effect that projects or programs are having as compared to other factors influencing a development situation;
- Specify where, when and how information will be interpreted, communicated and disseminated, including consultations as inputs to routine processes.

3 . Share Knowledge

- Document, analyze and review comparative experiences in program design, partnerships, monitoring and evaluation activities;
- Operate at different organizational levels (operational activities, strategic choices, corporate vision/priority) consistent with MSIF's knowledge-management strategy;
- Share knowledge and learning with communities of practice, using the global knowledge networks;
- Determine knowledge and information sources, including the type of evaluative evidence they provide and the frequency of their availability.

4 . Target Strategically

- Generate information that is appropriate for different users and timely in relation to decision-making and accountability requirements;
- Design, in consultation with users, appropriate formats and train staff to use them;
- Seek views of all key stakeholders, including program beneficiaries.

5 . Seek Empirical Evidence

- Cross-check and ensure quality of evaluative evidence to produce valid and relevant feedback.

Lessons are insights based on evaluation experiences. They go beyond the specific circumstances and can be *generalized*. Project lessons typically highlight the design or implementation strengths and weaknesses that affected project performance.

Example of a lesson:
"People with some prior experience using computers tend to absorb IT training better. In cases where we selected participants with more experience, average improvements in test scores were higher."

Lessons are:

- *Generalizable*, which means they are valid in or relevant to other contexts;
- *Significant and important*, which means you are able to remember them distinctly and to distinguish them from other findings;
- *New*; for example "content development takes time" is an "old" lesson, this is knowledge that you will be expected to have before the start of the project;
- *Unanticipated*; therefore a result or an impact cannot be a lesson learned.

Although lessons can be learned throughout both the Planning and Implementation Phases, there are many cases where findings cannot be generalized because they are highly dependent on the specificity of the context. It is important to be careful 'extrapolating', i.e. assuming that a particular case would be the same elsewhere (in a large share of cases).

Lessons learned generally occur in three stages:

- **Stage of Exploring:** identifying lessons that are of value for redesigning the project or that can be used by others working in the same field.

- **Stage of Explaining:** codifying knowledge in such a way that it can easily be identified and used by others.

- **Stage of Exporting:** disseminating among other team members, management, or other organizations in the form of lessons learned, the knowledge obtained from the monitoring and evaluation work.

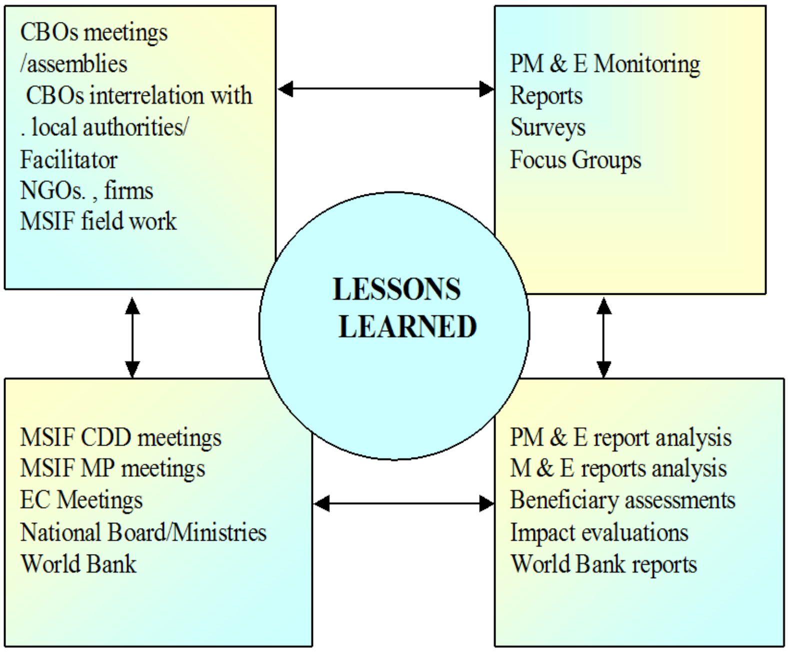
The table below may be useful for collecting and disseminating lessons learned.

Objectives	Activities	Collection of lessons learned	Audience	Analysis	Dissemination	Mechanism for use
To build community capacity	Create a Steering Committee and Supervisory board, Register as an CBO	Registering as an CBO does not work	MSIF and local authorities	Registration process too slow and costly	Discuss with WB Discuss with local authorities Discuss with GOM	Meetings Workshop

Capturing lessons by means of PME

The PM&E approach is an innovative tool that facilitates the loop for the capture and feedback of lessons learned starting at the beneficiary level, with their active participation in all the microproject cycle. The lessons learned at the beneficiary level are disseminated through different channels one of them is the PM & E Monitoring Report which has a specific chapter to collect them. Once they are collected they will be analyzed at different levels in the MSIF, and they will be systematized. Other channels are the assemblies, meetings with the facilitator (service Provider), focus groups, direct MSIF field work, etc. The input of these data in a systematic and organized way in the MIS, will establish a continuous evaluation, learning and feedback to enhance the MSIF implementation process at different levels.

Figure


CBOs meetings
/assemblies
CBOs interrelation with
. local authorities/
Facilitator
NGOs. , firms
MSIF field work
PM & E Monitoring
Reports
Surveys
Focus Groups
LESSONS
LEARNED
MSIF CDD meetings
MSIF MP meetings
EC Meetings
National Board/Ministries
World Bank
PM & E report analysis
M & E reports analysis
Beneficiary assessments
Impact evaluations
World Bank reports

5. Critical Implementation Issues

In order to meet the requirements specified in the previous sections, there are a number of aspects that must be clarified during the implementation process.

5.1 Critical Issues for M&E Implementation

The main elements that are critical to establishing the M&E system should include:

- PM & E data collection and input process, formally institutionalized
- There should be a clear data collection and data analysis plan.
- Baseline data should be established as early as possible.
- Defining indicators must be a participatory effort responding to needs of international and local partners.
- There must be clarity regarding the definition and collection of each indicator.
- Strategies should be developed to ensure that each indicator is properly employed in the context of the M&E system linked to the PM & E system .
- Institutional responsibility must be established to consolidate efforts to develop and M&E system within one organizational unit.
- MSIF Management level understand and are committed to a strong PM & E and M & E systems
- MSIF Management level trained in the use of the MIS system and /or in M&E .
- Coordination with partners from other sectors, such as the Ministry of Education and Ministry of Labor, Department of Statistics and Sociology as well as with local government institutions NGOs and CBOs to support program evaluation.
- Adequate human and financial resources should be available to allow the MSIF to implement the M&E system on an ongoing basis.

These aspects can be summarized in the following table that shows the key elements of a Monitoring and Evaluation Plan.

Table 5

Monitoring and Evaluation Requirements for	*How to Demonstrate the Evaluation Plan in Project Documentation*
(1) Demonstrate a project logic that is a) consistent, b) geared towards achieving measurable results and c) produces an impact on targeted communities;	• Demonstration of the logic or causal chain by which your project will deliver results • Demonstration of short term, medium term and long term objectives and strategies used to achieve identified objectives
(2) Monitor project progress and report regularly to partners on project progress;	• Logical model • Benchmarking • Budget for monitoring and evaluation activities • Timeline for monitoring and evaluation activities with allocation of responsibilities to team members
(3) Collect data according to certain indicators. Useful data should include data on beneficiaries and on the situation before the project in order to enable systematic monitoring and objective evaluation by the implementing organization, the Bank, and/or by an external party;	• Draft list of indicators that are specific, measurable, attainable, relevant, and trackable ("SMART") • Data collection plan and strategy • Data collection resources • Data collection timelines
(4) Evaluate ex-post (after the project): a) whether the project reached its goals; b) the impact of the project (which is not the same as reaching its goals); c) to what extent the project might be sustainable after project funding has ceased; d) under what circumstances the project might be replicated.	Evaluation plan, stating: • Goals of evaluation • Purpose; expected use of evaluation findings • Key evaluation or research questions • Scope of evaluation • Design • Method • Budget • Who will conduct the evaluation (staff/consultant)
(5) Have mechanisms in place for capturing and documenting lessons learned during and at the end of the project's Implementation Phase. What aspects of the project worked well and why were they analyzed and documented; (6) Have a mechanism in place for disseminating lessons learned and using the results obtained through lessons learned in enhancing program design;	• Responsibility assigned • Discussion on how organizational learning is taking place • Discussion on how lessons learned will be incorporated into program design

The following sections discuss specific aspects related to the implementation of the monitoring and evaluation plan.

5.2. Establishing Institutional Responsibility

Past experience has shown the importance of ensuring ownership of data by governments (policy-makers and program managers) throughout the data collection process to optimize its use. Government ownership may not lead immediately to better data use. There may still be strong political or other obstacles to turning data into action. However, it helps develop an integrated M&E system that is more likely to succeed than a fragmented system that meets the information needs of selected donors rather than national governments. Such ownership means that:

- The government agencies with primary responsibility for social care services monitoring and evaluation have to provide guidance and leadership to all actors involved in M&E activities throughout the data-collection exercise—from the integrated planning to the analysis, interpretation and reporting; and
- Existing national capacity (government and nongovernmental) must be strengthened to guarantee uniform, quality data within a sustainable framework (for example, sound training in M&E for institutions such as the Department of Statistics and Sociology of the Republic of Moldova or census bureau could be the best way to ensure this sustainability as they already have survey expertise).

Also, depending on the issues covered, strategic partnerships with key stakeholders need to be established at the design stage to better use PM & E

The MSIF M & E Specialist /staff will be responsible for the following actions:

- Coordination if program monitoring and evaluation activities related to MSIF.
- Organization of the collection of data (Key Performance Indicators) from national and local stakeholders and the PM & E level participating in the MSIF programs.
- Liaison with implementing agencies and partners required for implementation of key technical instruments (facility surveys).
- Management of the database of Key Performance Indicators.
- Preparation of reporting instruments for all stakeholders.
- Implementation of data quality control.
- Processing data from the PM & E level in coordination with the Promotion department
- Analysis of the monitoring and evaluation data, using local and external assistance.

5.3 Link with the Participatory M&E System

With increased emphasis on the importance of participation in development, there is also a growing recognition that monitoring and evaluation of development as a community based initiative should be participatory. As institutions become more "front-end" of project development- that is in promoting participation in the MP cycle – then questions of who measures results and who defines success becomes critical. PM&E becomes an internalized process for local communities who use this approach in order to make decisions regarding their final choice on what investment to prioritize, monitor its implementation and guarantee its sustainability. It can be stated that the MSIF II will formalize a process which previously has been put into practice not as a formal process but as a mean to demonstrate the communities' willingness and commitment to the successful completion on a first investment and thereafter ensure its sustainability, or as in some cases its complementation with the extension of the MP.

Another relevant function of the PM&E is the development of the learning process which strengthens the different stages within the MP cycle, if properly systematized, thus the PM & E allows beneficiaries and other actors as well, to assess their capacities. The self-evaluation and feedback process enhances the organizational learning and growth.

The main arguments generally made for participatory approaches to monitoring and evaluation (drawing on Abbot and Guijt1997; CONCERN 1996; Feuerstein 1986; Rugh 1992; Sommer 1993) are:

- Enhanced participation especially of beneficiaries, in M & E helps improve understanding of the development process itself;
- Increased authenticity of M & E findings that are locally relevant;
- Improvement of the sustainability of project activities by identifying strengths and weaknesses for better project management and decision making
- Increasing local level capacity in M & E , which in turn contributes to self reliance in overall project implementation
- Sharing of experience through systematic documentation and analysis based on broad-based participation
- Strengthened accountability to donors
- More efficient allocation of resources

Narayan-Parker (1993) summarizes how the difference between conventional and participatory approaches to evaluation (table below)

Differences between conventional and participatory evaluation	
Conventional	**Participatory**
Who External experts	Community members, project staff, facilitator
What Predetermined indicators of success, principally cost and production outputs	People identify their own indicators of success, which may include production outputs
How Focus on 'scientific objectivity'; distancing of evaluators from other participants; uniform, complex procedures; delayed, limited access to results	Self-evaluation; simple methods adapted to local culture; open, immediate sharing of results through local involvement in evaluation processes
When Usually upon completion of project/program; sometimes also mid-term	More frequent, small-scale evaluations
Why Accountability, usually summative, to determine if funding continues *Source:* *Narayan-Parker 1993: 12*	To empower local people to initiate, control and take corrective action

The PM&E scheme will develop local capacity with formal and mandatory processes / procedures reflected in the PM&E operational manual (under finalization). The PME & E indicators will be collected by the communities as part of the MP submission process (these include the Project specific and Impact indicators) and reflected in a set of excel sheets containing all data for each MP. The set of indicators for each MP proposal (which are under final revision) are:

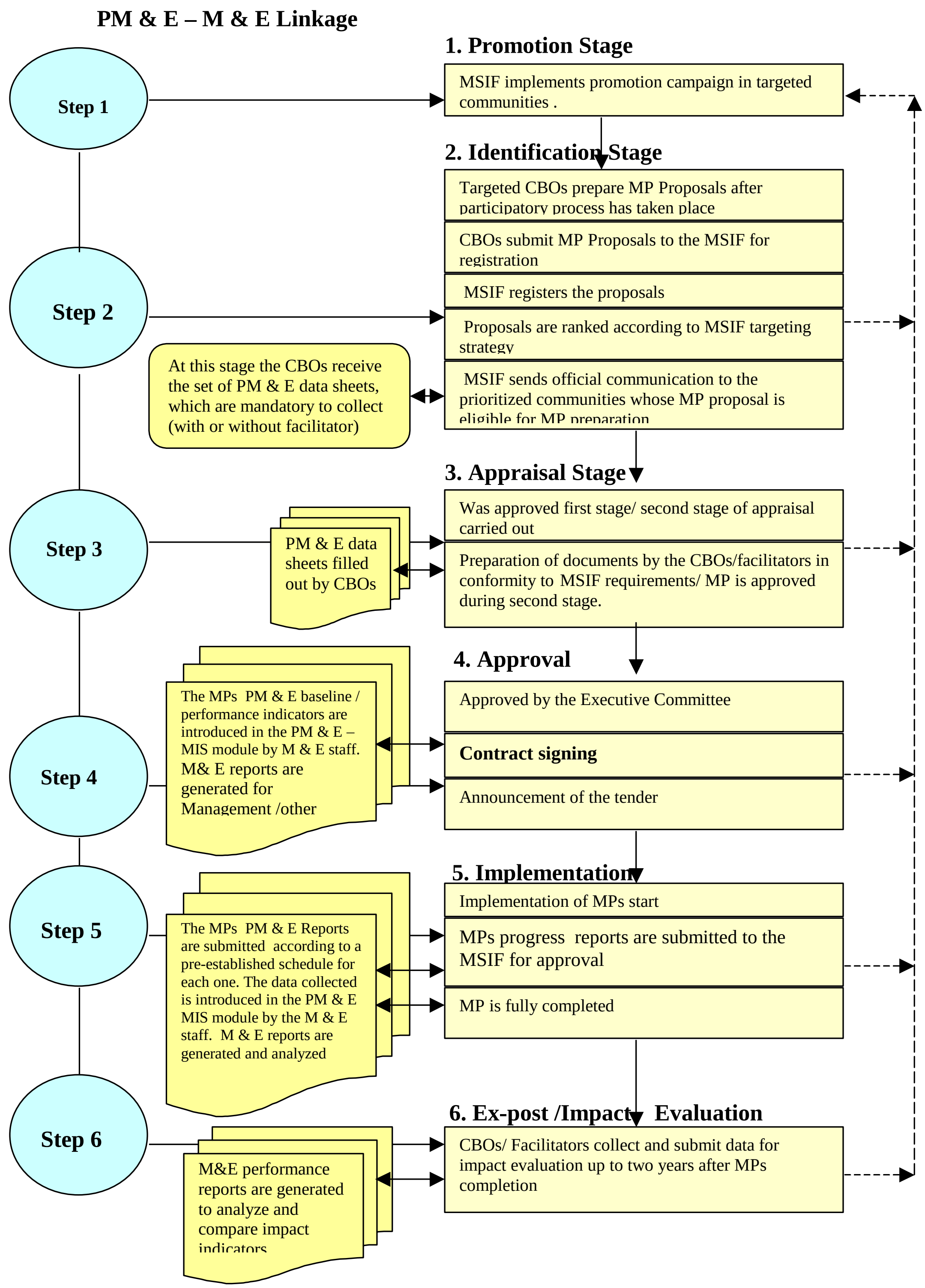
- Socio-Economic
- Microproject Specifics (by typology)
- Input (cost)
- Procurement
- Implementation
- Community Participation
- Training
- Environment
- Capacity Building
- Sustainability
- Lessons Learned

This set of indicators once the MP proposal has been approved will be input in a module within the MIS system, allowing its integration with the M & E system from the disaggregated level. The PM & E and ME systems will function as complementary systems, each providing valuable information for the other in consequence developing a comprehensive monitoring and evaluation mechanism to consolidate all the lower-level indicators into development and performance indicators as reflected in the Logical

Framework. The PM & E – M & E will become a systematic approach that will enable the MSIF to obtain continuous or at least frequent progress indicators and thus assess on the impact of its investments. Linking PM & E – M & E to the computerized MIS can help improve both the quality and the relevance of the evaluation. Impact assessments require a baseline, that is, a picture of the situation before the social fund intervention, which is then compared to the situation after the social fund intervention, the PM & E set of indicators will deliver the baseline data for each specific MP.

Unfortunately, baseline data are very seldom readily available and accessible from other sources outside the MSIF. The PM & E is a creative solution to obtain baseline data.. The pre defined set of indicators (*ex-ante),* are identified from the beginning and collected consistently with the support of a facilitator when required; and (b) once the MP is approved the specific data collected and submitted with each proposal will be actually entered in the MIS database for storage and further processing.

It will be also necessary to supplement data collected by the MSIF with other data. In the near future it could be possible to establish a link between the MSIF and the Department of Statistics, thus the two institutions could collaborate, providing each other updated detailed information on communities, consequently contributing to the



creation of a notable amount of baseline data nationwide.

Data Collection

Facilitators will support CBOs with the collection of the baseline data as part of the MP submission process and then they will continue to assist with the ongoing collection and pre established schedule of data reporting requirements. Taking into consideration that the implementation average time for a MP is six months, the PM & E Report will be submitted maximum twice during implementation stage. This mandatory exercise will continue for 2 years after completion, to effectively measure the impact at the community/region level. Timely submission of the data by the community could be a pre-condition to authorize disbursements while the MP is under implementation or to obtain access to a second micro-project under the MSIF II.

The MSIF PM & E will carry out monitoring primarily with information on each MP community indicators on: **targeting** (e.g., percentage of women beneficiaries, percentage of women in the Project Committee), **sustainability** (e.g., maintenance and use of the facility 1 year after completion), **capacity building** (e.g., enrollment rates, additional community-based initiatives), **empowerment** (e.g., women represented in community associations, requests to authorities), **standard of living** (e.g., morbidity rates, access to safe water), etc.

For each objective of the MSIF PM & E- M & E indicators on aggregated impact (e.g., percentage of infrastructure (**a**) specific outputs (e.g., number of new water systems, number of repaired schools, etc.), (**b**) disbursements (e.g., percentage of total microproject budget disbursed), and (**c**) performance (e.g., days in the appraisal phase per microproject, number of microprojects per supervisor, etc.).

The MIS will handle information on impact indicators in a systematic way, using a database of common impact indicators. Each microproject uses these impact indicators in its "mini" logical-framework and each indicator has "baseline data", "impact data" and "performance data". The "mini" logical framework is related to the Program Logical Framework allowing the MIS to produce individual and global impact reports.

PM & E – M & E

Social Funds all over have a number of characteristics that make their information needs different from those of other projects or organizations. Some of them include:

- Demand-driven approach that makes flexibility a must;
- Large number of contracts for works and services,
- Large number of small contracts and large number of disbursements
- A set of procurement methods, with a preponderance of community-based ,

- Operations in different sectors requiring a wide range of skills, monitoring approaches, service
- Frequent sub-contracting of important activities, such as outreach, monitoring and evaluation:
- An anti-poverty agenda requiring the selection and monitoring of specific indicators for evaluating impact; (PM & E)
- Information requirements for multiple stakeholders (government, donors, communities, contractors, NGOs, etc.), each with distinct information needs; making transparency and efficiency all the more important.

PM & E – M & E Reporting

The MSIF II management must take decisions on three major areas in which information needs lend to be fairly clearly defined:

- selection criteria for microprojects, requiring information on local needs (socio-economic indicators of beneficiaries, geographic location and sector of proposed intervention according to targeting strategy), and information on activities already undertaken (microprojects financed by sector and by location);
- interventions in problem microprojects, requiring performance indicators and performance criteria to identify problems;
- work organization within the social fund, requiring information on the internal performance of the different parts of the organization.

Management, therefore, needs information that is either aggregated, such as total disbursements for the month, or selected according to specific criteria, as in the case of problem microprojects. This information, to be called M & E information, has to be available in different forms: time series, maps, statistical summaries, etc.

- for its control function it needs access to financial and accounting information;
- for its strategic function (lessons learned PM & E – M & E reports the social fund generally being part of a broader anti-poverty strategy); it needs to know the impact of social fund activities broken down by components, subcomponents such as location, sector, beneficiary group and year/month.

Donor information needs are similar to those of government: detailed information to monitor procurement and disbursement, aggregate information to measure impact.

Reports must present information in a way that is concise and easy to understand. In general, most MSIF staff need detailed information on a limited number of items (e.g., the microprojects they actually follow and the cost of each MP and approved disbursements) while managers will need limited (i.e., summarized) information on a large number of items which shows performance indicators according to the stage of the MP at a PM & E (disaggregated) and M & E (aggregated) level. The frequency of the M & E Performance reports will be detailed in the M & E manual, although the MIS could produce them anytime with the latest updated information form the PM & E and M & E level.

Coordination with Partners: M&E working groups have proved to be useful coordination mechanisms for developing and implementing comprehensive national M&E strategies, including data-use plans. A working group monitoring and evaluation could be comprised of senior members of Ministry of Social Services , the Department of Statstics and Sociology and the MSIF M & E specialists. And other representatives from other line ministries, such as Education, Justice, and Labor who are important stakeholders and partners for the implementation of the programs activities.

In addition, bi-annual meetings with the network of stakeholders could prove to be an effective reporting mechanism. This would also serve as part of the lessons learned/feedback loop.

6. Implementation Plan

The implementation of a well-designed and managed M&E system will require considerable investment and support over the forthcoming years. In order to ensure that the system is managed on an ongoing basis, it is important to establish the critical steps associated with implementation and identify the staffing needs and resources that are required to provide and guarantee a well-functioning system for years to come.

Staffing

The MSIF will be responsible for implementation and management of the implementation process. It is strongly recommended that a permanent Monitoring and Evaluation Coordinator be established within the MSIF MIS Department and that a team of at least 2 analysts are contracted to provide support and to manage the M&E process. This team would also be responsible for coordinating, or liaising with other institutions and ministries to ensure the appropriate collection of data. The potential profile of these staff would include:

- M & E Specialist
- Economist
- Computer engineer with knowledge of visual basic and SQL server and Visual Foxpro

Table 6

Position	**Estimated yearly salary[6] Net/including taxes**
M&E Specialist	550/850$*12
Economist (PM & E at the PCDD)	550/850$*12
Program	550/850$*12
International technical assistance	$20,000
Sub-total staff costs	**$50,600**

<u>Professional Profile</u>

Duties and Responsibilities. The Monitoring and Evaluation Specialist is expected to play a key role in guiding MSIF staff and other relevant stakeholders in the implementation of the M & E system. This includes active contribution to capacity

[6] Subject to revision with PIU team members

development and training of MSIF staff involved in the implementation of the new M & E system.

Under the supervision of the Director of the MIS Department , acting in close cooperation with the Executive Office and the MSIF staff, the specific duties of the Monitoring and Evaluation Specialist are as follows:

Monitoring and Evaluation:

- Assist in developing a detailed implementation plan for the approved M&E system
- Assist in supervising and quality checking the development of the prescribed database programming;
- Develop and draw up a detailed training program on the new M&E system for the MSIF Management level
- Prepare the necessary documentation and materials needed for M&E training workshops
- Supervise and assist with the installation of the new PM & E- M&E system in the MSIF
- Assist in data testing and trial-running of the new M&E system
- Assist with the identification and implementation of needed adjustments to the M&E system;
- Conduct exposure and technical training sessions on the M&E system for staff
- Build up in-house capacity within MSIF on successful project planning, design, implementation, monitoring, and evaluation;
- Assist with the design and implementation of evaluations for the MSIF with particular focus on participatory evaluation methods;
- Ensure the successful commissioning. of the M&E system within the specified timelines.
- Coordinate and produce periodic performance reports on the MSIF II implementation
- Coordinate the collection of performance data from other sources;
- Assist with the designing and conduct of special evaluation surveys for the MSIF
- Provide strategic advice,
- Work closely with the Department of Statistics and Sociology and other relevant agency in coordinating and integrating relevant data;
- Provide technical assistance where necessary in data collection, data management, and information management for decision-making;

• Provide other technical assistance related to M&E

Documentation and Reporting

- Document lessons learned in the design and implementation of the M&E system for public dissemination both nationally and globally;
- Develop and produce periodic M & E Executive and Performance reports for special purposes as directed by the MSIF Executive Director
- Prepare and present an annual performance report on the MSIF to key stakeholders as required.

Required Skills and Experience. The M & E Specialist is expected to possess the following Professional qualifications:

- Post-graduate degree in public administration, business management, political science, sociology, financial management or related discipline.
- Five to seven years work experience, including consulting in M&E and areas directly related to public sector reform.
- Experience in the design and/or implementation of an M & E system, preferably in the public sector.
- Good understanding of change management concepts and approaches.
- Experience in conducting training sessions,
- Very strong planning, system development and organizational skills, including results-orientation.
- Excellent oral and written communications skills.
- Proficiency in English.
- Good understanding of participatory approaches to problem solving in public organizations.
- Ability to undertake field visits.

Survey Implementation

In addition to the core team that will be implementing the M&E system, it will be necessary to hire outside consultants or local research agencies to support the implementation of beneficiary assessments and the impact evaluations. The beneficiary assessment is just one element of an impact assessment. The impact assessment would bring together a team of experts, local and international, to analyze (or in the case of the baseline survey, to collect) all data on the project’s performance and to formulate conclusions and recommendations. The following table summarizes the survey activity that will be carried out and the estimated cost of these surveys using local resources for implementation.

Table 7: Estimated cost of survey implementation

Survey type	**Periodicity/Scope**	**Total estimated cost (5 years)[7]**
Beneficiary assessment	Yearly	$ 15,000
5 Focus groups	Each semester	$1,500*2
Impact evaluation	At the start, midterm and finalization	$15,000*3
Subtotals		**$63,000**

Hardware and Software

The following table summarizes the proposed costs in hardware and software:

Table 8

Budget Category	**Estimated investment**	**Recurrent costs (maintenance) (5 years)**
Server for PIU	$4,000	$10,000
Licenses	$800	
Connectivity		$10,000
Maintenance		$4,000 ($1,000 per year)
Subtotals		**$24,000**

Training Costs

The M&E coordination should have a small budget to support implementation of the system, including training activities with community based organizations, facilitators and government workers. In addition, some resources could be provided to finance external training for M&E experts. These costs include materials and supplies and per diems for participants and trainers. The following table summarizes the costs.

Table 9

Category	**Yearly Budget**
Training materials	$2,000
Travel costs (per diems)	$2,000 ($20 per day x 20 days trng x 50 people trained)
Publications	$1,000
International training/travel	$5,000
Subtotal	**$8,000**

[7] To be reviewed with local counterpart

Consolidated Budget

The following table presents a summary of the estimated implementation costs for the M&E system. This is based on the detailed estimates presented in the previous tables and a 5 year projection. The table also displays the estimated costs for the first year of operation.

Table 10: Consolidated Budget
1st Year and Total 5 years

Budget Category	**Total costs 5 years**
Staffing+TA	$50,600
Hardware and software	$24,000
Training	$8,000
Overhead (10%)	$14,560
Implementation of surveys	$63,000
Subtotals	**$160,160**

7. Timing and Responsibility of Evaluation

A well-designed and managed M&E program should develop the capacity of the MSIF to continuously monitor and evaluate progress with respect to the project's main objectives. The monitoring and evaluation framework should be carried out continuously throughout the project. The flow of information, including the M&E system as a key tool, should be closely linked to the development of accountability within the project, sector, government and Bank. The use of information can be structured and scheduled according to the needs of the participants and the availability of information. The following points highlight key aspects related to the use of the M&E system:

- Project management will need to monitor expenditure, input and output indicators, by component with project implementation against bar chart schedules, weekly and at least monthly.
- Outputs are unlikely to be measurable in less than three month intervals, and some may need longer;
- Surveys should be carried out at least every two years.
- Mid-term review including a thorough evaluation of all the indicators contained in the system should be carried after two years of project completion; and
- Final project evaluation should be carried out by an independent group and should analyze the impact of the project, as shown through progress in the system and information on funding. This would be carried out after the project has closed.

The MSIF has designated a permanent monitoring and evaluation Specialist. This person will be responsible for maintaining the system, including coordinating with outside agencies to obtain the necessary information, obtaining information from the Project director on the project management indicators, inputting all data, and preparing annual reports for the World Bank and the Project Implementation Unit director.

Continuous updating and analysis of this information will provide policymakers with valuable information on progress towards the project's objectives and provide continuous feed back on how investments are producing results for Moldova's most vulnerable population.

8. References

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Annex 1: Proposed Key Performance Indicators By Strategic Area

Category	Indicator	Source
People		
	Total number of beneficiaries by typology	PME + M & E +Social Service Pilots
	a. Children at risk (<18 years)	PME + M & E +Social Service Pilots
	b. Disabled children < 18 years	PME + M & E +Social Service Pilots
	c. People with disabilities > 18 years	PME + M & E +Social Service Pilots
	e. Women	PME + M & E +Social Service Pilots
	d. Retired people/Elderly	PME + M & E +Social Service Pilots
	e. # People participating in project preparation, implementation or evaluation (MSIF staff, implementing agency, local public administration, CBO, NGOs, contractors, design companies, local supervisors, trainers, facilitators, etc.)	PME + M & E
	f. # of people participating in the decisionmaking process	PME + M & E
	% of community based CBO functioning 2 years after project closed (registered and non registered)	PME-Survey
	Total number of members of CBOs	PME
	Total number of registered CBO as a share of the total number of created CBO	PME + Primaria
	% of beneficiaries satisfied or very satisfied with quality of MPs	BIA Survey or Focus Group
	% of the population that expresses a favorable opinion of the MSIF II Project	Public Opinion Research
	Average # of beneficiaries per MP	PME + M & E
	% of beneficiaries from targeted groups (small cities, rural populations, disabled, etc.) by typology	PME + M & E
	Employment generation by gender:	PME + M & E
	# of jobs generated (temporary and permanent). Measure temporary in man days.	PME + M & E
	# of jobs generated (direct and indirect)	PME + M & E
	% of jobs generated that are local level (in community)	PME + M & E

Proposed Key Performance Indicators
By Strategic Area

Category	Indicator	Source
Finance		
	Total Amount of contributions from community level	PME -Project Management (financial reports)
	% of total project amount financed by community	PME & Project Management (financial reports)
	Total Disbursements by category	Project Management (financial reports)
	Actual Disbursements as share of total planned disbursements	Project Management (financial reports)
	Expenditure by component and typology	Project Management (financial reports)
	Project Administration + Overhead as a share of total expenditure	Project Management (financial reports)
	Total Expenditures as a share of approved budget by component	Project Management (financial reports)
	Average cost per type of projects per beneficiary	PME
	Contract cost as a share of estimated cost	Project Management (financial reports)
	Final cost as a share of contract cost	Project Management (financial reports)
	% of MPs delayed during implementation	Project Management (financial reports)
	Operational expenses of social care projects as share of total planned operational expenditures	Social Service Component
	Operational expenses of social care projects as a share of total investment costs	Social Service Component
	Programming cost (furniture, equipment, training and TA) as a share of total investment cost	PME + M & E
	Expenditure on environmental component as a share of total MP costs by typology	PME + M & E
	Total incremental investment by communities in communities where a MP was implemented in last 2 years (after 1 MP finished) by typology	PME
	Total incremental investment by communities as a share of total MSIF investment in last 2 years (after 1 MP finished) by typology	PME

Proposed Key Performance Indicators
By Strategic Area

Category	Indicator	Source
Works		
	Expenditures on works completed as a share of planned expenditures on works	PME + M & E
	Expenditures on social service programming costs completed as a share of planned social service programming costs by typology	PME + M & E
	# of new created services by type and region	PME + M & E
	# of new constructions by typology	PME + M & E
	# of rehabilitated infrastructure in targeted areas by MP type	PME + M & E
	# of new household gas connections	PME + M & E
	# of household water systems connections	PME + M & E
	# of kilometers of pipelines water/gas/irrigation	PME + M & E
	# of kilometers constructed roads	PME + M & E
	MPs extended as a share of total MPs	PME + M & E
	% extension of work as a share of total MP work implemented	PME + M & E

Proposed Key Performance Indicators
By Strategic Area

Category	Indicator	Source
Training		
	# of training by type, topic and targeted groups	PME + M & E
	# of person days of training by type of training and targeted groups	PME + M & E
	# of technical assistance consultations provided	PME + M & E
	% of people satisfied with training activities	BIA + Survey
Process and results		
	Total number and % of houses that have connection to safe water	PME
	Total number and % of beneficiaries with access to safe water	PME + MOH + Ministry of Ecology
	% of Water and Sanitation Projects that include a component of Information, Education and Communication on personal hygiene	PM&E + Communication strategy
	Total number of children long-term institutionalized in targeted areas	PME
	a. No. of children benefiting from social care services within the Center	PME
	b. No. of children benefiting periodically from social care services within the Center	
	c. No. of children benefiting from social care services on outreach approach	
	Total number of beneficiaries from social care services from targeted groups	PM&E + Ministry of Labor and Social Protection
	Number and % of Vulnerable Persons from targeted areas	PM&E + Ministry of Labor and Social Protection
	# of Social Care Centers active by type of service to total no. of services created	Ministry of Labor and Social Protection
	Total number of children abandoned	PME+National Statistical Agency
	Modernization of legal framework on social assistance	Project Management Data+Monitor Oficial
	% of decrease in the number of respiratory diseases among school children ('000 population)	PME + Center of Public Health and Management (MOH)
	Incidence of intestinal infections ('000 population) in MP Communities	PME + Center of Public Health and Management (MOH)
	Proportion of households connected to sewerage system	PME + National Statistical Agency
	% of houses with sewerage systems	PME + Ministry of Ecology+ MOH
	Net enrollment rate primary school	PME + Ministry of Education+ National Statistical Agency
	Drop out rate from secondary school	PME + Ministry of Education+ National Statistical Agency
	% of houses with heating systems other than wood burning	PME + National Statistical Agency

Annex 2: KPIs

Objective	Key Performance Indicators									
		Baseline			Mid-term				End of Project	
Project Development Objective	Outcome/Impact Indicator		Target	Actual	Target	Actual	Target	Actual	Target	Actual
Contribute to the implementation of Moldova's Economic Growth and Poverty Reduction Strategy by empowering poor communities and of vulnerable groups to manage their priority development needs through: (i) improved delivery and quality of basic social and economic services: and (ii) development of the capacity their institutions and strengthening social capital.	- #of people having benefited from SIF interventions.									
	-Application of new approaches by service providers									
	-Level of satisfaction of beneficiaries with services provided w. SIF Interventions.									
	- # of communities implementing new projects after SIF									
	- # of rehabilitated facilities providing services after SIF completion.									
	- # of communities following sustainability plan.									
	- # of communities which have developed and implement Community Development Plan.									

Objective	Key Performance Indicators									
		Baseline			Mid-term				End of Project	
Project Development Objective	**Outcome/Impact Indicator**		**Target**	**Actual**	**Target**	**Actual**	**Target**	**Actual**	**Target**	**Actual**
	-# of communities which provide services targeted to specific vulnerable groups - # of active and sustainable CBOs									
Output from each Component	**Output indicators**									
<u>Component 1:</u> Community Development										
Sub component 1.1. Rural community Micro projects										
Output 1.1.1. Rehabilitated facilities Output 1.1.2. Improved services	-Total number of microprojects completed by Typologies - # of persons benefiting from improved services									
Sub component 1.2 Pilot projects for small towns	-Total number of microprojects completed by Typologies - # of persons benefiting from improved services									

Objective	Key Performance Indicators									
		Baseline			Mid-term				End of Project	
Project Development Objective	**Outcome/Impact Indicator**		**Target**	**Actual**	**Target**	**Actual**	**Target**	**Actual**	**Target**	**Actual**
Output 1.2.1. New procedures for micro project in urban areas developed	-The Operational Manual with new procedures inserted completed									
Sub component 1.**3.** Capacity building of SIF partners (CBOs, LPAs, contractors, local authorities)	- # of persons having received SIF training by type /topic									
Output 1.3.1. Improved capacities of SIF partners										
<u>Component 2:</u> **Social care services development**										
Sub component 2.1. Pilot projects										
Output 2.1.1. Comprehensive community based social care plans developed for each pilot region	- # of social care plans									

Objective	Key Performance Indicators									
		Baseline			Mid-term				End of Project	
Project Development Objective	**Outcome/Impact Indicator**		**Target**	**Actual**	**Target**	**Actual**	**Target**	**Actual**	**Target**	**Actual**
Output 2.1.2. Complementary integrated social care services established in pilot regions	- #of types of services provided and tested -Operational manual section elaborated									
Sub component 2.2. Capacity building for central (social assistance offices) and local government and of service providers										
Output 2.2.1. Methods and procedures established	- # and topics of methods developed. – Section in Operational Manual prepared									
Output 2.2.2. Improved capacities of participants	- # of persons having received SIF training by type /topic									
Component 3: Capacity building, monitoring and evaluation										
Sub component 3.1. Contribution to capacity building of governmental institutions and learning of policy lessons										
Output 3.1.1. Identification of best practices - models	- # of best practices identified and formulated									

Objective	Key Performance Indicators									
		Baseline			Mid-term				End of Project	
Project Development Objective	Outcome/Impact Indicator		Target	Actual	Target	Actual	Target	Actual	Target	Actual
Output 3.1.2. Lessons learned identified for policy development	- # of lessons learned and formulated									
Sub component 3.2. Communication, Dissemination and replication of best practices										
Output 3.2.1. System for communication between SIF and partners established	- # of recipients in communication system									
Output 3.2.2. Communication strategy established	- # of communication messages									
Output 3.2.3. Types of experiences to disseminate identified	- # of dissemination Activities									

Objective	Key Performance Indicators									
		Baseline			Mid-term				End of Project	
Project Development Objective	**Outcome/Impact Indicator**		**Target**	**Actual**	**Target**	**Actual**	**Target**	**Actual**	**Target**	**Actual**
Output 3.2.4. Lessons learnt disseminated	- Types of dissemination activities identified - # of dissemination activities per types conducted – # of recipients - institutions and persons contacted									
Output 3.2.5. Agreements reached for replication of practices and lessons	- # of MOU's signed and # of signatory partners									
Sub component 3.3. Monitoring and evaluation										
Output 3.3.1. Communities' performance regularly monitored	- # of communities regularly monitored and their percentage of total									
Output 3.3.2. New participatory M&E guidelines produced	- # of communities participating inmonitoring and evaluations - # of changes in SIF procedures									
Output 3.3.3. SIF performance improved as result of feedback from impact assessments										

Objective	Key Performance Indicators									
		Baseline			Mid-term				End of Project	
Project Development Objective	Outcome/Impact Indicator		Target	Actual	Target	Actual	Target	Actual	Target	Actual
Component 4: Project management										
Output 4.1. Efficient and effective implementation of project activities	- Cost of SIF activities compared with national averages - Disbursements planned/actual - # of micro projects planned/actual - # of trainings planned/actual									

Annex 3: Reporting Requirement

Objective	Key Performance Indicators	Source	Frequency	Responsible for colleciton
Goal	Outcome/Impact Indicator			

MSIF Monitoring and Evaluation Performance Report						Period From: To: /semester/yearly)	
Activity	**Baseline Indicator**	**2004**		**2005**		**Progress**	
		Target	Progress	Target	Progress	Total	% Variation
Component 1 – Community Development .							
1. Rural micro-projects; ***(by typology)***							
a. Pilot urban projects (small towns)							
b. Community-based organizations (CBOs)							
2. Local government capacity building ***(by typology)***							
Component 2 – Social Care Services Development 1.Social care services micro-projects; ***(by typology)***							
2. Capacity building for central (social assistance offices)							
3. Local government and service providers							
Component 3 – Communication, Monitoring and Evaluation and Capacity Building. **1.** Capacity building of governmental institutions and learning of policy lessons;							
2. Communication, dissemination							
3. Participatory monitoring and evaluation.							
Component 4 – Project Management							

Annex 4: Rationale and uses of focus groups

Focus groups are a form of group interview that capitalizes on communication between research participants in order to generate data. Although group interviews are often used simply as a quick and convenient way to collect data from several people simultaneously, focus groups explicitly use group interaction as part of the method. This means that instead of the researcher asking each person to respond to a question in turn, people are encouraged to talk to one another: asking questions, exchanging anecdotes and commenting on each others' experiences and points of view. The method is particularly useful for exploring people's knowledge and experiences and can be used to examine not only what people think but how they think and why they think that way.

Focus groups were originally used within communication studies to explore the effects of films and television programs and are a popular method for assessing health education messages and examining public understandings of illness and of health behaviors. They are widely used to examine people's experiences of disease and of health services, and are an effective technique for exploring the attitudes and needs of staff.

The idea behind the focus group method is that group processes can help people to explore and clarify their views in ways that would be less easily accessible in a one to one interview. Group discussion is particularly appropriate when the interviewer has a series of open ended questions and wishes to encourage research participants to explore the issues of importance to them, in their own vocabulary, generating their own questions and pursuing their own priorities. When group dynamics work well the participants work alongside the researcher, taking the research in new and often unexpected directions.

Group work also helps researchers tap into the many different forms of communication that people use in day to day interaction, including jokes, anecdotes, teasing, and arguing. Gaining access to such variety of communication is useful because people's knowledge and attitudes are not entirely encapsulated in reasoned responses to direct questions. Everyday forms of communication may tell us as much, if not more, about what people know or experience. In this sense focus groups reach the parts that other methods cannot reach, revealing dimensions of understanding that often remain untapped by more conventional data collection techniques.

Some potential sampling advantages with focus groups

- Do not discriminate against people who cannot read or write

- Can encourage participation from those who are reluctant to be interviewed on their own (such as those intimidated by the formality and isolation of a one to one interview)
- Can encourage contributions from people who feel they have nothing to say or who are deemed "unresponsive patients" (but engage in the discussion generated by other group members)

Kitzinger J. The methodology of focus groups: the importance of interactions between research participants. Sociology of Health and Illness 1994;16;103-21

Annex 5: Qualitative Analysis of Open-Ended Questions

Annex 5: Example of LQAS

Lot Quality Assurance Sampling

In this project a sample of 19 households were chosen to assess each supervision area of the project's catchment area. This sample size was chosen because it has an acceptable amount of error associated with it. In practical terms, with a sample of 18, the corresponding measurement error will result in more project areas being misclassified. With a sample of 20, the same number of supervision areas will be misclassified as with the sample of 19. Therefore, the smaller sample of 19 is preferable because it is more efficient.

The following table shows a wide range of upper and lower thresholds for interventions, decision rules, and the corresponding sensitivity and specificity for a sample of 19. Because this is a crucial table, it is explained in detail.

Row 1 consists of a range of upper and lower thresholds. It is a triage system. For example, 0the first value is 80%:50%. This means that this particular LQAS design will accurately detect communities with coverage that is 80% or higher, and those with coverage that is 50% or lower. Each additional cell in row 1 presents another triage system such as 70%:40%, 50%:20%, and so on.

Row 2 consists of decision rules that will lead to the accurate classification of communities according to the triage criteria. In brief, a catchment area can be accurately judged as having, say, 80% or higher measles vaccination coverage if in a sample of 19 children, six or fewer of them are not vaccinated. If more than six are not vaccinated then the catchment area is classified as having inadequate coverage.

Row 3 is the *sensitivity* for each decision rule. For example, a 19:6 rule will accurately identify at least 93.2% of the areas with 50% or less coverage. A 19:10 rule will accurately identify at least 91.2% of the areas having 30% or less coverage.

Row 4 is the *specificity* for each decision rule. For example, a 19:6 rule will accurately identify at least 91.6% of areas with 80% or more coverage. A 19:10 rule will also accurately identify at least 91.6% of the areas having 60% or more coverage.

Row 5 is the total error which is: (1-specifity) + (1-sensitivity).

This information will be applied as follows:

If the catchment area manager wants to know whether at least 80% of the mothers know how to prepare and use ORT, the area supervisor would visit 19 systematically selected households. If six or fewer of those mothers *did not know* how to do it, then the area would be judged as having reached the standard. As the table shows, a 19:6 decision rule is 91.6% specific in identifying areas that have reached or exceeded the 80% threshold. And it will be at least 93.2% sensitive in identifying areas in which 50% or fewer of the women know the intervention.

LQAS Table of 11 Triage Thresholds, Their Decision Rules for Judging Catchment Area Coverage, Related Sensitivities, Specifications, and Total Error.											
Triage Thresholds	**80%-50%**	**75%-45%**	**70%-40%**	**65%-35%**	**60%-30%**	**55%-25%**	**50%-20%**	**45%-15%**	**40%-10%**	**35%-10%**	**30%-5%**
Decision Rules For n=19	19:6	19:7	19:8	19:9	19:10	19:11	19:12	19:13	19:14	19:15	19:16
Sensitivity	0.932	0.923	0.916	0.913	0.912	0.913	0.916	0.946	0.965	0.885	0.933
Specificity	0.916	0.913	0.912	0.913	0.916	0.923	0.932	0.922	0.93	0.941	0.954
Total Error	0.152	0.164	0.172	0.174	0.172	0.164	0.152	0.132	0.105	0.174	0.113

A. Progress toward Quality

LQAS can be used by PVOs/NGO managing catchment areas to assess progress in their own area regularly (e.g., annually). Using the first table presented, a local manager would initially choose modest thresholds. As coverage improves the thresholds would progressively increase until the areas are being assessed on whether or not they have reached the project's objectives. For example, in monitoring DCM, or PCM a manager would use a 50%:20% triage. Over time as coverage improves, thresholds would increase to 60%:30%, 70%:40, 80%:50%.

0. **Making Decisions**

In addition to aiding local managers, LQAS data can be useful to the focus country network manager and to the *Networks* team by providing data to measure the indicators in a form that can be reported to PVO headquarters and to USAID. In this table, seven catchment areas have been sampled to assess ORT coverage using a 50%:20% triage, and a 19:12 decision rule. As this table shows, catchment areas 3, 4, and 6 have reached the 50% standard while 1, 2, 5 and 7 have failed to reach it. Network managers can therefore focus their efforts on the catchment areas not reaching the standard.

An Example of Using LQAS Results from 7 Management Unit Catchment Areas to Calculate a Coverage Proportion with Confidence Intervals						
Management Unit	**n**	**d**	**A=(n-d)/n**	**N**	**Wt=N/ΣN**	**Wt*A**
1	19	14	0.263	10250	0.19	0.05
2	19	12	0.368	5000	0.09	0.03
3	19	8	0.579	7500	0.14	0.08
4	19	6	0.684	8000	0.14	0.10
5	19	13	0.316	6250	0.11	0.04
6	19	9	0.526	9000	0.16	0.09
7	19	13	0.316	9250	0.17	0.05
Total Coverage				55250		0.43
Confidence Interval =						0.082
d=observations not having the intervention, n=LQAS sample, A=management unit coverage, N=size of the catchment area						

These data will also be used for another purpose, namely, to calculate overall coverage with the intervention in the entire network catchment area. As the table shows, the coverage is 43% $\pm$8.2%. By aggregating the seven small samples from each PVO/NGO catchment area (which in their own right are useful for local management decision making), coverage in the entire project area can also be measured in a form that is easily reported.

We should point out that the above table uses a standard format for calculating coverage weighted by the size of the population in each catchment area. However, this precision is not really necessary. If the population sizes in column 5 were reduced to one (resulting in a total of seven), the resulting coverage measure would increase by one percentage point. This amount of error probably does not warrant determining precisely the population sizes.