

REVIEW AND ASSESSMENT
OF
THE INFORMATION SYSTEM
FOR
RURAL DEVELOPMENT PLANNING, MONITORING AND EVALUATION

17

By The Technical Assistance Team
of The Rural Development Monitoring and Evaluation Project

NOVEMBER 1986

(Thailand)

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EXECUTIVE SUMMARY

The purpose of this report is to set forth the major findings and recommendations of the RD/ME Technical Assistance Team review of the existing information systems used for planning, monitoring and evaluation in the National Rural Development Program. It covers the overall NRD planning cycle and the procedures, forms and reports which are used or produced in the planning process. It also assesses the strengths and weaknesses of the monitoring and evaluation components of the existing system. Finally, it reviews the overall progress of the development, management and operation of the information system. The report does not include an assessment of the organization and management of NRDP or of the large body of rules and procedures which are used in the Program. Since the evaluation was called for in the original Project Paper and was part of the first project workplan, it is anticipated that the recommendations included in the report will provide the basis for the future activities of the Technical Assistance and Special Study components of the the RD/ME project.

The report is composed of two main sections. Section II identifies the functions and activities of the NRD system and the types of information required by the principal agencies and participants in the system. Section III presents the principal findings and recommendations of the review. The structure of the NRD Program describes the four main functions which need information from

the information system. These are policy formulation, planning/budgeting, monitoring, and evaluation. Section III also covers the information required to perform these functions, the findings of the team, and recommendations to strengthen the information system. Section III is structured to consider these activities separately even though the functions of the NRD Program are closely interrelated. At the end of the paper, some general findings and recommendations serve to integrate the separate functions.

1. Policy Formulation

In the NRD Program, policy formulation is concerned with expressing what the government intends to do to solve rural development problems, and defines the amount of resources that will be put into the program. There are several actors in the policy formulation process because policy is set and interpreted at many levels. To carry out policy formulation these actors require information which defines rural conditions and problems, measures which differentiate relative degree of development need, a set of programs and projects to meet those needs, and budget and cost information. Review of the use of information in policy formulation function in NRD revealed the following findings:

- Village problem indicators need to be revised
- Program funding priorities need specification
- Ministry policy frameworks require better coordination
- Changwat need more useful and accurate information
- National budget document should more clearly specify NRDP funding

Recommendations to strengthen the use of information in policy formulation in NRDP are:

- Develop macro-indicators of rural development needs
- Develop rural development simulation models
- Develop reports using evaluation findings
- Develop a changwat data base

2. Planning/Budgeting

Planning and budgeting are functions which follow directly from policy-making. To be effective planning and budgeting need good data and information including a basic set of data which describes the conditions and problems of the specific area involved; information to establish the criteria for determining which areas have the most urgent needs for development projects, and a clear description of the programs available to solve problems; guidelines which establish financial parameters for planning; information to estimate the future levels of funds available for rural development projects; and a clear description of each project which allow those who participate in the planning process to determine which projects best meet the needs of a particular location. The findings which relate to the planning/budgeting process in NRDP are:

- NRD 6 (the ministry policy framework) needs better coordination
- Data volume is overtaxing the system
- 6th Plan decentralizaed planning strategy requires information system changes
- Changwat/amphur planning requires budget constraints
- Data reported in NRD 3 should be reduced

- The project menu needs revision
- Future funding levels/priorities are needed
- NRD 2C needs to be simplified and shortened
- Village problem indicators need revision
- Duplication exists in village data collection
- Operations target programming is not utilized
- Recent studies propose guidelines for changwat planning activities

Recommendations developed to strengthen planning and budgeting activities in NRDP include:

- Develop macro indicators and strengthen village problem indicators
- Revise reports used in planning
- Standardize project inputs and projected outputs
- Examine ways to reduce reporting detail on NRD planning forms
- Planning constraints should be established
- Develop planning models
- Examine ways to reduce duplication in data collection
- Operations target programming should be strengthened

3. Monitoring

In NRDP monitoring should serve several purposes including the measurement of progress of rural development projects during implementation; identification of problems in project implementation so that corrective actions may be quickly taken; and accounting for and monitoring the use of financial resources so that funds committed for projects are used as budgeted. More than any other function, effective monitoring requires that managers at all levels be involved in defining appropriate monitoring measurements. The information needed for monitoring includes a budget for each project and the

expenditure plan identified by time frame, a listing of project inputs showing what the project funds will be used for, a set of outputs which show what is expected as a result of the inputs, and a time schedule showing project activity completion targets. Findings of the Technical Assistance Team relative to the monitoring function in NRDP are:

- Monitoring is not viewed as a management activity
- Standardized project inputs, outputs, and timetables are not available
- The current monitoring form is not useful or timely

Recommendations to address these findings are:

- Revise the monitoring framework
- Develop monitoring models
- Develop performance indicators

4. Evaluation

Evaluation is a process for calculating or assessing the effects and impacts of a program or projects measured against the target objectives established in the program or project plan. The process of evaluation, particularly impact evaluation, is greatly complicated by the influence of external factors which may cause changes in village conditions. The purposes of evaluation in NRDP are to determine the effects of completed rural development projects, to assess the total impact of projects and programs on rural communities, and to undertake financial and program analyses in order to make cost/benefit comparisons for planning future rural development

projects. The information required for effective evaluation includes the anticipated effects of each project, a measurable set of preconditions relative to the project which can be compared with post-project conditions, an estimate of the anticipated impacts of the project, and a set of baseline data which will allow measurement of specific or overall change in the village. Review of evaluation activities in NRDP yielded the following findings:

- Evaluation is not viewed as part of the management process
- Anticipated effects and preproject measurements are not always specified
- Too much emphasis is put on having common evaluation measures
- Impact evaluation results are not fully utilized
- External factors are not considered in impact evaluation

Recommendations developed to strengthen evaluation in NRDP are:

- Familiarize management officials with evaluation techniques
- Specify anticipated effects and impacts
- Develop cost/benefit models
- Expand previous impact evaluation work
- Conduct on-site village impact studies
- Develop measures for "thresholds of poverty"

5. General

Several findings and recommendation did not really fit into the separate functions of policy formulation, planning/budgeting, monitoring or evaluation. Instead, they cut across all functions or serve to integrate the functions. These findings are:

- Information system components need integration
- NRDP data bases are not fully utilized
- Changwat capabilities for planning and monitoring need strengthening
- Recent studies propose guidelines for changwat planning activities

Recommendations for general strengthening of the NRDP information system are:

- Develop department information system models
- Develop improved data access and storage methods
- Develop a complete, simple changwat information system
- Conduct workshops to coordinate findings and recommendations of the DDMP, TDRI, and RD/ME projects
- Involve changwat officials in drafting instructions and manuals
- Workshop planning should follow specific guidelines
- Support changwat system development activities

Chart IV in the Summary section of the paper illustrates how each of the recommendations fits into the framework of the NRDP information system.

SECTION I

INTRODUCTION

The purpose of this report is to set forth the major findings and recommendations of the RD/ME technical assistance team review of the existing information systems used within the NRDC framework to plan, monitor and evaluate RTG rural development programs. It covers the overall NRD planning cycle and the use of the procedures, forms and reports which are used or produced in the planning process. It also assesses the strengths and weaknesses of the monitoring and evaluation components of the existing system. Finally, it reviews the overall progress of the development, management and operation of the information system.

This evaluation was called for in the original Project Paper and was part of the project Workplan developed in September 1985. It is anticipated that the recommendations included in this report will provide the basis for the future activities of the Technical Assistance and Special Study components of the RD/ME project.

This report is a review and assessment of the information system components of the National Rural Development Program (NRDP). It does not include an assessment of the organization and management of NRDP or of the large body of rules and procedures which are used in the Program. We cover these matters only where such factors influence

the information available or how it is used. Several other recent studies--notably the Final report and Report on the Study and Experiment of Provincial Development Planning of the DDMP project; the main Report on Management Improvement of NRDP, the UNDP project carried out by TDRI; and NESDB's Guidelines for Local-Level Planning Process in Thailand -- have covered aspects of the RD organization and management. Where those studies cover issues that touch on the operation and use of the information system, many of our findings duplicate these other findings and recommendations.

In Section II, we document and diagram the functions and activities of the NRD system and define the types of information required by the principal agencies and participants in the system. In this section we spell out the functions which the information system is intended to serve within the specific context of the NRD program. This section establishes the context for making our review of the NRDP information system.

Section III, the main body of the report, presents the principal findings and recommendations of our review and evaluation of the existing system. In this section, each main component of the system is described and conclusions set forth about the conceptual framework and the utilization of the component. We address the following questions: Does it work as planned? If not, is the problem conceptual, procedural, or something else? What changes could be made to meet the requirements of managers/planners for the right information in the proper form at the time it is needed? Following the findings for each function are recommendations for ways to

strengthen these system components, correct problems which have been identified and, in general, improve the use of information in these processes.

The preparation of this report was based on information gathered from a study of reports, system descriptions, a survey questionnaire of project managers in the RPAP operating departments, and discussions with planners, managers, ministry representatives and users at both the central and changwat levels. The central intent of the report is to set forth an overall assessment of the entire information system. Primary attention is given to the planning component, including the content, processing and use of the NRD 1-7 forms. However, because the total information system is a set of integrated components, a review of the monitoring and evaluation components is also included.

As background for evaluation, we would like to highlight two points which are especially important to the future development of the system. The first is the RTG decision to phase out the predetermined, area-based approach to targeting of rural development projects, as was used in RPAP. Instead, the allocation of development resources in the 6th Plan will be based on the information system for rural development. This is an extremely significant decision, with major implications for the development and use of the information system and for the way in which the RD/ME project is carried out. First of all, it accentuates the importance of the information system in providing accurate, reliable and timely information for use in policy

formulation, planning/budgeting, monitoring program implementation, and evaluation results. Secondly, the decision to expand the information system to the entire 72 changwat (from just 236 amphoe in 38 changwat) will expand the magnitude of the data base by 5 to 10 times, if the system components are continued in their present form.

This expansion in the coverage of the planning/programing system for rural development, and in the amount of data which is required to be collected, processed and utilized, must be taken into account in evaluation of the system. We have attempted to do that, while at the same time considering ways in which the system might be strengthened by overcoming the problems which stem from the data expansion. In doing this we are aware of the move to decentralize the information handling functions by development of information systems for the changwat, and by the creation of changwat information centers with micro-computer installations. We have encouraged and continue to support this move. At the same time, we also believe that a guiding principle in further system development, including the changwat information system, should be to "start simple," that is, to begin with a simple system which government officials can understand and use. Once this has happened, and their basic information needs are met, the system can be expanded.

One finding we have noted through the process of making this review deserves mention here. We have observed that certain terms are used with quite different meanings by different individuals. This sometimes causes considerable confusion. In order to make our meaning

clear, and to foster a common understanding of the subject matter and the component parts, we have developed and included in Appendix A a description of the concepts used to develop and evaluate management information systems and also a set of definitions of all the principal terms related to information systems.

SECTION II

THE FRAMEWORK FOR THE INFORMATION SYSTEM FOR RURAL DEVELOPMENT IN THAILAND

The Rural Development planning, monitoring and evaluation system is a management information system. Its purpose should be to provide accurate, timely and useful information to those who establish the policy for the rural development program, and for the planning, monitoring and evaluation of the program. Therefore, to be effective the information system must be part of the overall management system. They are not separate, and as stressed in Appendix A the information system will not work unless it is made an integral part of the management system. The information must serve those who set policy, plan, manage, implement, monitor and evaluate programs.

Charts I and II show the overall framework for the NRD Program and for the information system used in the policy planning, formulation monitoring and evaluation of the program. These functions are described in detail in Section III of the report.

Chart I documents the functions and activities of the National Rural Development Program. This chart diagrams the process by which the RTG rural development program is carried out. It divides that process into components, as we have discussed above, and shows what functions and activities are performed by the various agencies in each of the components. It also

shows the linkages among the components and the flow of activities among the participant agencies. This chart is a preliminary description of how we believe the system works now, modified in some respects by how we think it should operate in the Sixth Plan.

Chart II documents the information needed for policy, planning, monitoring and evaluation in the National Rural Development Program. This chart is laid out in the very same framework as Chart I. Its purpose is to show in summary format the information which is needed or used at each step in each component of the system. It also shows how the information would flow between the components of the rural development program and among the agencies.

This chart is also a preliminary framework of the information system. It will always replicate Chart I and will change as the rural development program changes over time. At any point in time, key officials who will use the information, both in the central level agencies and at the changwat, should help to define their specific information requirements.

CHART I

NATIONAL RURAL DEVELOPMENT PROGRAM : FUNCTIONS AND ACTIVITIES

	NRDC	DEPARTMENTS/MINISTRIES	NRDCC	BOB	CHANGUAT	AMPHOE	TAMBON	MUBAN
POLICY	<ul style="list-style-type: none"> Define rural development problems State rural development program objectives Establish allocation criteria (to changwat) 	<ul style="list-style-type: none"> Prepare Ministry Policy Framework 	<ul style="list-style-type: none"> Analyze development problems Develop program plan, objectives, policies Prepare allocation criteria 		<ul style="list-style-type: none"> Identify development needs and priorities Formulate changwat development strategy 			
PLANNING/ BUDGETING	<ul style="list-style-type: none"> Approve budget targets Approve NRD program plan and budget 	<ul style="list-style-type: none"> Develop projects to address problems Develop cost estimates Develop project objectives Develop progress measurements Review, revise & approve changwat plan 	<ul style="list-style-type: none"> Formulate NRD program budget Review changwat plans 	<ul style="list-style-type: none"> Prepare final NRD budget 	<ul style="list-style-type: none"> Review amphoe project requests Develop changwat plan 	<ul style="list-style-type: none"> Develop amphoe plan Review tambon project requests 	<ul style="list-style-type: none"> Develop tambon plan 	<ul style="list-style-type: none"> Prioritizes Muban development needs
PROJECT PERFORMANCE MONITORING		<ul style="list-style-type: none"> Prepare monitoring criteria Review & analyze progress Report progress Take corrective actions 	<ul style="list-style-type: none"> Review & analyze progress reports 	<ul style="list-style-type: none"> Review reports Evaluate progress 	<ul style="list-style-type: none"> Review amphoe report Prepare changwat report Take corrective action 	<ul style="list-style-type: none"> Review progress Take corrective action 	<ul style="list-style-type: none"> Prepare progress report 	
PROJECT EFFECT EVALUATION	<ul style="list-style-type: none"> Review effect evaluation analysis 	<ul style="list-style-type: none"> Prepare criteria and methods Review reports, and evaluate effects summarize results 	<ul style="list-style-type: none"> Review reports analyzes results summarize Nat'l persp. 		<ul style="list-style-type: none"> Review criteria Review information collected 	<ul style="list-style-type: none"> Gather information 		
PROJECT IMPACT EVALUATION	<ul style="list-style-type: none"> Review impact evaluation analysis 		<ul style="list-style-type: none"> Prepare criteria and methods Conduct special studies Evaluate program impact 		<ul style="list-style-type: none"> Gather and report data 			

CHART II

NATIONAL RURAL DEVELOPMENT PROGRAM INFORMATION NEEDED FOR POLICY, PLANNING, MONITORING AND EVALUATION

	NRDC	DEPARTMENTS/ MINISTRIES	NRDCC	BOB	CHANGWAT	AMPHOE	TAMBON	MUBAN
POLICY	<ul style="list-style-type: none"> • Info. which define rural conditions and problems • Indicators to differentiate relative degree of need 	<ul style="list-style-type: none"> • Data which define rural conditions • Prior project cost data 	<ul style="list-style-type: none"> • Data which define rural conditions & needs • Prior program cost and results • Government development priorities 		<ul style="list-style-type: none"> • Data which define rural conditions in the changwat • Indicators to differentiate among Amphoe/Tambon 			
PLANNING/ BUDGETING	<ul style="list-style-type: none"> • Program/project costs • Framework, objectives of program plan and budget • Future funding levels 	<ul style="list-style-type: none"> • Program cost data • Changwat profile • Budget ceilings • Village indicators 	<ul style="list-style-type: none"> • Program cost data • Budget ceilings • Village indicators • Project objectives • Future funding levels 	<ul style="list-style-type: none"> • Approved budget targets and cost factors 	<ul style="list-style-type: none"> • Estimated budget ceilings • Village problem indicators • Amphoe problem ranking • Demographic data • Project descrip. • Future funding levels 	<ul style="list-style-type: none"> • Village problem indicators • Changwat development priorities • Project descrip. • Program limits 	<ul style="list-style-type: none"> • Village problem indicators • Changwat development priorities • Project descrip. • Program limits 	<ul style="list-style-type: none"> • Village problem indicators • Project descrip.
PROJECT PERFORMANCE MONITORING		<ul style="list-style-type: none"> • Changwat progress reports • Technical field feedback 	<ul style="list-style-type: none"> • Progress measurements • Ministry evaluation of changwat progress reports 	<ul style="list-style-type: none"> • Authorized budget • Changwat progress reports 	<ul style="list-style-type: none"> • Progress measurements • Project progress expenditures & problems 	<ul style="list-style-type: none"> • Progress measurements • Project progress expenditures & problems 	<ul style="list-style-type: none"> • Progress measurements • Project progress expenditures & problems 	
PROJECT EFFECT EVALUATION	<ul style="list-style-type: none"> • NRDCC evaluation reports & ministry comments 	<ul style="list-style-type: none"> • Changwat project effect summaries • NRDCC evaluation report 	<ul style="list-style-type: none"> • Project objectives • Changwat project effect summaries 		<ul style="list-style-type: none"> • Evaluation criteria • Reporting requirements • Project objectives 	<ul style="list-style-type: none"> • Technical staff feedback • Evaluation criteria • Project objectives 		
PROJECT IMPACT EVALUATION	<ul style="list-style-type: none"> • NRDCC impact evaluation reports 		<ul style="list-style-type: none"> • Village poverty indicators, problem indicators & other village data • RD Program objectives 		<ul style="list-style-type: none"> • Evaluation criteria • Reporting requirements 			

SECTION III

REVIEW AND ASSESSMENT OF THE INFORMATION SYSTEM FOR RURAL DEVELOPMENT IN THAILAND

In order to assess whether the present information system is meeting the needs of the NRD program, it is necessary to know specifically what functions are to be served by the system, and what the needs are for information of the organizations and people who carry out those functions. As noted in Appendix A the basic principle is that an information system is only so good as the extent to which it meets the real needs of the intended users. The most perfectly designed system, no matter how comprehensive and technically sophisticated, is of little use if it is not used or understood by its intended users. Conversely, the simplest, most basic system is successful if it is understood, used and appreciated by its intended users.

Broadly speaking, there are five main functions (or processes) which must be served by the rural development information system:

1. Policy formulation
2. Planning / budgeting
3. Project monitoring (during implementation)
4. Project effects evaluation
5. Impact evaluation

These functions are separate, discrete processes with needs for specific kinds of information. Some of that information is required for only one of the functions. Certain information is required in several of these functions. The baseline village data collected from NRD 2C, for example, is needed in policy formulation, program planning, and both effects and impact evaluation. This demonstrates that while these are separate functions, they are also interrelated. Thus, the information system must take into account not only the information needs of each function, but the need for common information, so that the system ties the parts together into an integrated whole.

The next five parts of this section contain the information requirements, findings, and recommendations resulting from this review. The last part of Section III contains a summary of these information requirements which illustrates the integrated nature of the NRD program information system. The approach followed in this report is to first identify the primary issues and discuss findings. Each section on findings is followed by a section which includes recommendations for strengthening the system.

1. POLICY FORMULATION

Policy formulation is a function which is basic to any large governmental organization or program. In the case of the NRDP it is an expression of what the government intends to do, how it will be done, and the amount of resources that will be put into the program.

For the NRD program the highest policy-making body is the National Rural Development Committee (NRDC), which establishes the broad framework of the program and authorizes the amounts of money to be spent for specific programs/projects.

But there are other actors in the policy-making process. Some of them establish policy, such as the changwat in the formulation of a policy framework for tackling its particular development problems. Other agencies assist in rural development policy-making by serving as staff to committees. These staff agencies -- NRDC, for example -- formulate policy which may be adopted by the committees/agencies which set policy.

Policy formulation is not a strict, step-by-step process. It does however, have some component activities and products which should be present if the process is to serve its real purpose. In order to assess the information needs of the NRD program, it is necessary to identify those activities and products. A sound policy formulation process for the NRD program would include the following:

- o NRDC, based on staff analysis by the NRDC :
- identifies main development problems to be addressed,
- formulates the strategies for development programs,
- designates which programs/projects will be given highest priority in terms of funding allocations.
- establishes the basis, or criteria, to be used in allocating funds by area (region, changwat)

- o Based upon a format developed by NRDC, and approved by NRDC, the ministries prepare the policy framework to be used by the changwat in preparing their development plans.
- o The changwat formulate their separate development strategies, based on the ministry policies, to tackle the problems considered most urgent by the changwat.

The NRDC has adopted a set of policy directions which have been incorporated into the 6th Plan. There are four main objectives:

- (1) Decentralize more responsibility to the changwat for development planning.
- (2) Focus development resources primarily in the poorest villages and middle-level villages.
- (3) Emphasize coordination among government and private agencies to solve rural problems.
- (4) Foster more self-help by support of people's organizations in community problem solving.

In reviewing the existing system, we have attempted to determine what information is required by the agencies involved in those policy formulation steps, or to produce the documentation needed to describe rural development policies.

1.1 Information Requirements for Policy Formulation

All of the agencies involved in NRD Program policy formulation require information in this process. The job of the information system is to provide the right information in the proper form at the time it is needed. For these agencies the system should provide the following information:

- 1.1.1 Definition of rural conditions and problems.
- 1.1.2 Measures (indicators) to differentiate relative degree of rural need.
- 1.1.3 Programs and projects available to meet rural needs including evaluations and assessments of past performance.
- 1.1.4 Budget and cost information.

The need for information by those involved in policy formulation is the broadest information which will be required from the system. Some of it may be derived from a summary of detailed information gathered and used for other purposes. Much of it, however, must be separately assembled to meet the broad view of those who establish policy.

To establish policy, the NRDC must be able to interpret the information it is given. Thus, a particular characteristic of policy-level information is that it must be the product of synthesis and analysis. For example, if child death rates are much higher in the northeast than in the north, while the reverse is true of upper respiratory infection, some analysis is required of these problems not only to decide what to do about them, but which is most significant and requires the most resources.

1.2 Policy Formulation Findings

1.2.1 Village problem indicators need to be revised. The concept of using village problem indicators, which has been developed by NRDC/PIED to classify villages according to degree of development need, is a sound, creative approach to the process of setting priority targets for allocation of resources. While the concept is a good one, it will serve its purpose only to the degree that the indicators are valid measures of the problems being identified, and to the extent that the data used in producing the indicators are accurate and reliable. We have concluded that there is a need to address both of these issues on a systematic basis. Some of the indicators need to be revised, using accepted statistical methodology and standard international measures (where appropriate).

In addition, there is widespread scepticism of the reliability of the village data used in generating the indicators. Before these issues are tackled, however, there needs to be a broader consensus of what would be the most appropriate measures of development need.

1.2.2 Program funding priorities need specification.

While the 6th Plan guidelines describe the main strategies of the NRD program, and specify the basis for targeting where resources will be allocated, we have not been able to determine which programs/projects will be given priority in the planning/budgeting process. All of the main problems are described, but it is not clear which are considered most serious or urgent, and which programs will be given priority in funding. This reflects insufficient program and problem analysis based on information which should be available from the village survey (NRD 2C) and as feedback from the monitoring and evaluation processes.

1.2.3 Ministry policy frameworks requires better

coordination. There is not enough coordination in the preparation of policy frameworks developed by each ministry. As a result, they are inconsistent in format, degree of specificity, and clarity (though

changwat officials report that the MOI and MOPH policy frameworks are the most clear and specific). They also arrive at different times in the changwat -- usually behind schedule. This all contributes to confusion and lack of positive guidance to the changwat.

1.2.4 Changwat need more useful and accurate information. The changwat do not have an integrated, up-to-date data base for common use by all the changwat-based participants in the preparation of the policy framework to guide changwat development programming. Each of the ministry representatives at the changwat has access to data collected through ministry/department channels. Some of this data is technical (in support of particular department projects); some of it, however, duplicates data collected in the NRD 2C survey. The NRD 2C output (indicator) reports are available, but changwat officials find them difficult to use and are doubtful about the degree of accuracy of the data from which they are produced. This was reported directly to us, and is a consistent finding of other workshops and reports. For a more extensive discussion of NRD 2C and its uses, see section 2.2.8.

1.2.5 National budget document should more clearly specify NRDP funding. The NRDC has approved the amounts of funds to be allocated to each of the 156 individual development projects to be implemented through the four principal ministries. This is a crucial policy guideline. According to our information, however, structure of the national budget document makes it very difficult, if not impossible, to determine how much money is actually appropriated by the budget to each project. To the degree this happens, it is impossible to verify whether the NRDC policy guidelines are being followed.

1.3 Recommendations to Strengthen NRDP Policy Formulation

1.3.1 Develop macro-indicators of rural development needs.

At the national level, a concrete process should be initiated to develop a set of analytical information which will provide a clear macro-picture of the status of development in rural areas. While some good approaches have been started, there is a gap between the broad awareness of particular problems - in health, water resources, income, etc. - and the information provided by data generated by the village survey. We recommend that a consultant expert on indicators or a special study be utilized to

formulate these macro indicators and analytical frameworks. A specific process is outlined in the planning recommendations (section 2.3.1) which describes how this should be carried out. This study would identify the measures of development need and progress, and establish the basis for relating needs to programs and resources.

1.3.2 **Develop RD simulation models.** Using this analytical framework and the macro-level measures of development problems and needs, we recommended that models be developed which will facilitate correlations of problems and needs with project outputs and funding levels. This process would allow simulations and projections of how a given program (a grouping of projects) would solve or reduce a particular set of problems. These models would allow policymakers to consider the anticipated benefits of alternative program and funding strategies.

1.3.3 **Develop reports using evaluation findings.** In the section on evaluation we recommend that the results of effects and impact evaluations be fed back into the policy planning cycle. This would be done by regular reports to policy-level officials -- the NRDC and ministry officials -- on the results of these evaluations. These reports, to be useful for policy-level officials, must be concise, brief and

analytical. They should describe the principal evaluation findings, describe what was achieved compared to planned results, what major problems and obstacles occurred, what conclusions can be drawn from the evaluation, and what actions are proposed. These reports can serve policymakers by evaluating results and feeding this information back into the planning and funding of future programs.

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Special
Studies*

1.3.4 Develop a changwat data base. We recommend that a deliberate process be initiated to establish a model changwat data base for all changwat. This would be a basic set of data needed by all changwat for planning its development program. Individual changwat could, of course, expand the amount of data they wanted to include to meet their particular needs. This data base would be used by all changwat based officials involved in development programming. The crucial step in planning this standard data base is to involve changwat officials in its design. The specification of what is to be included should be determined by a selected groups of changwat officials, assisted by knowledgeable staff from both changwat and central agencies.

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2. PLANNING / BUDGETING

Planning and budgeting are functions which follow directly from policy-making. The policies established by the NRDC provide the framework for the planning which is done within the ministries. The policies set by the changwat development committee (within the national policy framework) establish the development framework for the amphur/tambon in problem identification, selecting projects and setting priorities. Planning will be more successful if it is guided by policies which clearly define the problems to be addressed, the programs to be implemented to overcome these problems, the priorities to be given in terms of funding and allocating projects, and the criteria to be used in distributing resources among regions, changwat, amphur, etc. Planning, in other words, depends upon clear, well-formulated policies to provide direction to those who do the planning.

If planning flows directly from policy formulation, then in the same sense budgeting flows directly from the planning process. Planning is the process of deciding what is to be done, and how; budgeting is the process of deciding how much resources will be used to carry out the plans, and the allocation of amounts to parts of the plan. In a very real sense, planning and budgeting are inseparable parts of one process--the process of deciding what to do, where to do it, how much to spend on it, and how these amounts will be allocated.

Planning, of course, serves the purpose of making the activities of the government more rational, and more systematically ties those activities to the development strategies of the country or of the changwat. To be effective, planning must be realistic. This means that it must be done with financial parameters which are within reasonable constraints. Planning involves making choices about what will be done within the limits of financial resources which may reasonably be anticipated to be available. If there are no limits set, choices will not be made, and the resulting "plans" then become simply lists of projects which an agency or organization would like to do or receive. Thus, at every level in the NRD program, better planning will be done if it is accompanied by policy guidelines which establish realistic levels of funding.

2.1 Information Requirements for Planning/Budgeting.

Good information is the central requirement of an effective planning/budgeting process. In the NRD program, this includes information which pinpoints problems and where they exist, describes basic facts and conditions of given areas (regions, changwat, amphur, etc.), establishes the target funding levels for programs/projects, spells out the criteria or basis for funding allocations, and defines the specific inputs, outputs and anticipated effects of each project.

A special point of emphasis should be made here about the importance of clearly defining and specifying the planned inputs and the target outputs and expected effects of each project. This is a crucial step in the operation of the entire information system, for it is these measures which link planning/budgeting with the monitoring and evaluation to follow. By specifying the inputs and outputs during the planning/budgeting process, a basis is established to appraise the costs and expected results of the projects. These same measures are then used during project implementation to monitor progress, and after project completion to evaluate results--effects and impacts.

For planning/budgeting, based on the above, the following categories of information are needed as part of the overall information system:

2.1.1 At each level -- national, region, changwat, amphur, tambon -- a basic set of data -- population, resources, income, etc. -- which describes the conditions and problems of the area involved.

2.1.2 Information to establish the criteria for determining which areas have the most urgent need for development projects, and which forms the basis for allocating funds among competing locations.

2.1.3 A clear description of the programs (and the priorities of those programs) available to solve problems identified by the data and guidelines which establish financial parameters for planning at each level in the process.

2.1.4 Information to estimate the future levels of funds available for rural development projects.

2.1.5 A clear description of each project in the rural development "menu", which will allow those who participate in the planning/budgeting process to determine which projects best meet the needs of a particular location. This description should also include for each project:

- a) a clear set of planned inputs,
- b) projected outputs,
- c) Basic cost information for components of projects and a specification of the limits on amounts which may be allotted for each project location.

If each area of information specified above were available, the planning/budgeting process would have available to it all of the information tools necessary to perform this function efficiently.

2.2 Planning/Budgeting Findings

In the NRD program, a great deal of work has been devoted to the establishment of a planning/budgeting process which will help to achieve an integrated rural development program. We recognize the difficulties involved in trying to build such a process where there are so many agencies involved, and which spans the vertical flow of reporting from the ministries down to the villages. This is a major undertaking, and much has been achieved in the past five years.

Our review of the planning/budgeting process, and particularly of the use of information in that process -- how the information system serves the process -- was done with a view of how the system which is in use can be strengthened; in other words, how the RTG can build on what has already been created. Our findings and recommendations, therefore, are aimed at improving what already exists, gaining from past experience, and taking advantage of new insights and technologies.

A number of other studies have already made assessments of the RD planning process, and have identified certain problems and weaknesses. Occasionally we will touch upon some of these which we have found from our own review.

2.2.1 NRD 6 needs better coordination. The ministry policy framework (NRD 6) process is not sufficiently

coordinated; this causes serious problems for the changwat, and, inhibits effective integrated planning/programming in the changwat.

2.2.2 Data volume is overtaxing the system. The

expansion of the NRD planning system from only the 33 RPAP projects to all NRD projects (156) has vastly enlarged the volume of data which must be collected, screened and processed at every stage of the process. This expansion of the planning process is overtaxing the capacities of officials and agencies at all levels to properly analyze issues and projects -- and make decisions -- given the amount of clerical and logistic activity required.

2.2.3 6th Plan Decentralized Planning strategy requires information system changes. The RPAP program stressed the concept of greater involvement by local people and officials in selecting and targeting projects. Several reports have pointed out that a sizeable proportion of these decisions are still made centrally. The 6th Plan makes decentralization an explicit development strategy. Changes will have to be made in the information system to reflect this decentralization policy. One step, for example, would be a reduction in the amount and detail of reporting to Bangkok in the NRD planning process.

2.2.4 Changwat/amphur planning requires budget constraints.

Planning, to be effective, must be done in the context of realistic financial constraints. It requires choices to be made of what will be done with a limited amount of money. Without limits -- financial or others -- plans become merely "wish lists" of projects. This condition appears to occur in many changwat. In one changwat, two-thirds of the funding for projects proposed by the amphur (NRD 2) were eliminated in preparing the changwat development plan (NRD-3). Of the funding for projects requested in that plan, only one-third was authorized by the RTG budget. Thus, the projects finally authorized and funded were only one-ninth of those requested in NRD 2. This lack of limits contributes to weak planning and decision making, and greatly increases the volume of information to be processed and screened. Finally, it passes real decision making up to the highest levels and thus preempts a policy of decentralized planning. The lack of realistic financial constraints also dilutes the validity of the operations target programming (OTP) analysis, which is an exercise designed to compare projects funded with "real" needs.

2.2.5 Data reported in NRD 3 should be reduced. The requirement that all project sites be identified for every project in the changwat plan (NRD 3) adds greatly to the volume of information required to be processed. For even the smallest projects, where activities are carried out at many locations, this requirement applies. There is evidence that central departments responsible for these projects really do not use these detailed site locations in their budget programming. Thus, there may not be need for this detail to be included in NRD-3 for low-cost projects with many sites. We see a need for further exploration of ways to reduce the volume of data included in NRD 3.

2.2.6 Project menu needs revision. The project "menu" does not promote realistic planning for rural development because it does not contain for each project a concise statement of planned inputs, projected outputs, and basic cost information for components of the project. Without this information it is impossible for planners to accurately align development needs with projects designed to aid development. It is not possible for planners to make choices based only on project title.

2.2.7 Future funding levels/priorities are needed.

Future funding levels for NRDP are not available for planners in the changwat or in the ministries/departments. Without estimates of future funding levels associated with national program priorities it is difficult for planners to produce long range development plans for changwat.

2.2.8 NRD 2C needs to be simplified and shortened. The

village survey and its output products are central ingredients of the NRD planning process. The survey questionnaire (NRD 2C) produces a huge data base. Only a small part of that data base is used to produce the village problem indicator reports. These reports are actually used in all components of the planning, monitoring and evaluation (and are commonly referred to as the NRD 2C reports). Several studies have found that the village indicator reports are often inaccurate, that they are difficult to use efficiently, and that the data is out of date. Our review confirms these findings.

These conclusions, however, are based on the 1984 NRD 2C survey and the output reports from the data from that survey. Over the past year, a concerted effort has been initiated by NRDC to make an extensive revision of the NRD 2 C questionnaire.

The approach to collecting and coding the data has also been revised. The revised questionnaire should generate clearer and more quantitative responses. All of this should help make the NRD 2C data base more reliable.

It is too early to tell whether the data collected from this new survey will be more accurate than in the past. Involving the entire tambon working group in the data collection process should help toward that objective. In any case, because this data base is such a central part of the overall system, it certainly should be used for the purposes planned. It is the best data available. The long term effort should always focus on ways to increase the accuracy of the data and improve the methods for how it is used. We believe that in the long-term, a substantial shortening and simplification of the questionnaire is necessary.

2.2.9 Village problem indicators need revision. The primary use of the NRD 2C data base is to produce the indicator reports which are used in planning and targeting projects and in monitoring and evaluation. We found that less than one-fourth of the questions in the 1984 survey were used to produce the data which generates the indicator reports.

In Section 1.2.1 we have described the multiple uses of the indicator reports. As we described there, the concept of using these indicators is a very good one. We have found from our overall analysis, however, and from feedback from those who use the indicators at both the changwat and central levels, that some extensive revisions are needed of the indicators themselves, and of the indicator reports produced for the various users. The indicators would be strengthened by more accurate village data, use of accepted standard measures, and output formats which meet specific requirements of the users.

The NRDCC has initiated a process to revise the indicators, by trying to determine if new or revised indicators can be produced from the questions in the new NRDC 2C. In the short-run, this should at least make it possible to correct some of the methodological problems in the present indicators. In the long term, we believe a more fundamental revision of the indicators and their use is needed.

2.2.10 Duplication exists in village data collection. In addition to NRDC 2C there are a number of other similar surveys conducted by RTG agencies. These include the BMN survey, a household survey which is

aggregated at village levels; the DOLA village data report; an experimental survey developed by CDD; and the census information collected by NSO. It may be that one survey cannot serve all agency needs. These survey processes are expensive to undertake and there is already some recognition that unnecessary duplication may exist; a committee is currently examining the overlap between the BMN survey and NRD 2C.

2.2.11 Operations target programming is not utilized. As part of information system development under the RPAP the process of operations target programming (OTP), or the comparison of NRD 3 (the changwat request) and NRD 5 (approved and funded projects), was developed. The theory behind this process is that project requests which are not funded represent unmet needs for rural development. By examining this unmet need in each year, department, changwat, and districts can target programming (planning) in subsequent years to fill this unmet need. In reality, OTP should be an evaluation of the results of the planning process.

There are several problems in NRDP with the use of OTP. First, it is not always the case that the changwat plan reflects true need. We have found that in many cases it really represents a "wish list". Second, we found that and changwat department

planners rarely use prior year unfunded requests in developing current year plans. Finally, OTP does not include comparison with NRD 2C (the village data), which is assumed to be the most accurate reflection of rural development needs. However, we believe the concept of OTP could be useful and that it should be more fully developed for use in the NRD Program.

2.3 Recommendations to Strengthen NRDP Planning/Budgeting

2.3.1 Develop macro indicators and strengthen village problem indicators. Two sets of baseline data are needed for planning: The first is a set of descriptive data about villages in the beginning of the Sixth Plan. This data should be used to pinpoint development needs on a macro level and it would also be used as a basis for comparison for impact evaluation at the end of the Sixth Plan. This data would not be technical data for planning and implementing projects, but rather broad data which describes Thailand's rural development needs. The second set of data is baseline data which would be used for yearly planning. These sets of data would be collected by surveys. In accordance with survey development technique, however, the indicators (or uses) of the data should be determined first. Therefore, we are recommending a very specific method

for developing macro indicators, strengthening the village problem indicators, and obtaining the data used to produce these indicators.

(1) First, as noted in the project paper, a consultant with expertise in rural development economic, social, and political indicators should be commissioned to develop a set of macro indicators to be used for describing and measuring the level of rural development in Thailand and to identify development needs. An alternative method would be to initiate a special study utilizing a multidisciplinary team from the regional universities.

(2) Second, working with department field and central staff, the consultant would develop micro level indicators which could be used by these departments to identify the need for specific projects.

(3) Third, the consultant working with NRDC would then determine the degree to which NRD 2C provides accurate data which can be used to generate macro-level indicators which have been defined to be necessary to describe broad development need and measure change in that need. If NRD 2C cannot provide appropriate data

in its present form, it should be revised to produce the required data.

- (4) Finally, the consultant would work with NRDCC and the department staff to develop a substantially shorter questionnaire to provide data for the micro level indicators which would identify needs for projects. It is anticipated that this questionnaire would be developed to be used every year to provide accurate, timely data for planning. We do not believe a general survey should attempt to collect technical data. We recommend technical data necessary for placing projects be gathered by operating departments. Most of it is already gathered by these agencies.

2.3.2 Revise reports used in planning. Seminar/Workshops should be held with a select group of changwat planners and project managers to define a set of routine reports (including indicator reports) which would be useful for planning. These workshops would be coordinated with the development of the baseline data described in 2.3.1 above. As part of this, participants in these workshops would examine the results of the current DDMP planning experiment in the 10 changwat in order to utilize the experience and knowledge gained from that project.

2.3.3 Standardize project inputs and projected outputs.

Seminars/Workshops should be held with project managers to define project inputs and projected outputs in a standardized format. These inputs and outputs (as well as the anticipated effects and impacts mentioned in the monitoring and evaluation sections) should be included (in some form) in the project menu so that planners at all levels have a clear idea of what a project is anticipated to do for a village as well as how the project operates.

2.3.4 Examine ways to reduce reporting detail on NRD

planning forms. Extensive study should be made of ways to substantially reduce the amount of detail required in NRD 1,2,3 and 5. Also included in this study should be possible alterations of the format in order to reduce the amount of paper required to produce the NRDC plans.

2.3.5 Planning constraints should be established.

National policy set forth by NRDC and the ministries should include instructions to the changwat that limits are to be imposed on requests submitted by the amphur and changwat. It is imperative that NRD 1,2, and 3 move from "wish lists," as they often are now, to realistic descriptions of development need if operations target programming is to be realistic.

These limits could be either financial or in numbers of project sites.

2.3.6 Develop planning models. Planning models should be developed at the changwat and national level. These models would allow simulations and projections to aid in developing changwat and national plans. Monitoring and evaluation data would be incorporated into these models. Consultants should work closely with planners at all levels to develop useful and planning realistic models.

2.3.7 Examine ways to reduce duplication in data collection. A special effort should be made to reduce the redundancy and duplication of village data collection. Interagency cooperation in data collection and use should be the first premise of integrated rural development.

2.3.8 Operations target programming should be strengthened. If planning constraints are imposed for field level planning, OTP will have to shift slightly in its emphasis, for NRD 3 and 5 will no longer, in theory, represent total need. Instead they will represent real need within realistic budgetary constraints. However, even if budget constraints are imposed, not all projects requested on NRD 3 will be approved. Therefore, the comparison of NRD 3 and NRD 5 is still

important and we believe that the use of prior year unfunded requests should be encouraged in the development of current year NRD 2 and 3. We also recommend that OTP be expanded to use data from NRD 2C and that the analysis be expanded to compare project requests, unfunded requests and rural development needs.

3. THE MONITORING AND EVALUATION PROCESS

In its Staff Appraisal Report, Thailand National Rural Development Project (February 29, 1984), the World Bank began its section on monitoring and evaluation:

" The continued success and evolution of NRDP will depend very largely on the institutional processes which allow the system to continually monitor and evaluate achievements, and to make changes as appropriate."

In fact, monitoring and evaluation (M&E) are critical to the success of virtually all development projects, and a great deal has been written about the concepts involved in M&E activities. In this and the next two sections these basic concepts will be applied to the NRD program to define the roll of the overall information system in providing appropriate information for M&E activities in the NRDP.

It is true that monitoring and evaluation are related; but they are also separate activities which require distinct types of information. Therefore, in this paper they will be considered separately. However, the link between the two will also be discussed. To begin, we must consider the definition of both activities so that it is clear from the outset what each activity is and is not.

Definitions : What is Monitoring and Evaluation?

Monitoring for what? Evaluation of what? In its broadest sense, monitoring means the measurement of progress achieved against certain pre-established target objectives and schedules. Monitoring is an internal, day-to-day management activity. Evaluation, in these same terms, means determining to what degree the results (whether intentional or unintentional) of a given effort (a project or program) have achieved the desired or pre-established objectives.

Monitoring : A process for determining the progress of implementing an authorized program or project. The progress is measured by reviewing the use of inputs (funds, personnel, etc.) and target outputs (number of fishponds built, number of people inoculated, etc.) against a planned budget and timetable.

Evaluation : A process for calculating or assessing the effects and impacts of a program or project, measured against the target objectives established in the program or project plan. For example, did the new fish pond increase nutritional levels, provide additional income; did the inoculation program reduce the incidence of disease, and by how much -- compared to pre-established objectives.

As defined above, the purpose of monitoring and evaluation coordinates with the planning process by determining how successfully projects are actually being implemented, according to a planned budget and schedule, and by evaluating whether they are achieving their planned results and impacts. The results of the monitoring and evaluation processes should be used in subsequent policy and planning activities.

The above definitions have described the essence of monitoring and evaluation. It is clear, however, that there is some overlap in the processes and in the information requirements. For example, project effects are used in both monitoring and evaluation activities. Chart III below shows the relationships among the key elements used in monitoring and evaluation and presents some examples to illustrate this relationship.

4. MONITORING

Monitoring has a number of purposes. In a broad sense, it is a basic tool of management to determine how efficiently planned projects are being executed, and how effectively budgeted resources are being used. To be more specific, monitoring serves the following purposes in rural development:

- (1) To measure progress of rural development projects, during implementation, against a planned time schedule and annual budget allocations. Progress monitoring data is also used to facilitate analysis of implementation experience, to provide feedback for the next annual planning/budgeting cycle.
- (2) To detect and identify problems in project implementation, so that corrective actions may be quickly taken to prevent costly delays.
- (3) To account for and monitor the use of financial resources, so that funds committed for projects are used as budgeted.

With these points in mind, we believe it is essential to involve managers at all levels in developing appropriate monitoring measurements. In the monitoring process there is a need to summarize information as it moves upward. Information should also be

synthesized somewhat as it is used by managers at different levels. This means that in addition to summarizing specific village project progress and problem identification into tambon and then into amphoe and then into changwat reports, the type of information may actually change in order to serve managers at all levels effectively.

For example, at the amphoe level (which is where the implementation of most projects is actually supervised) the managing official needs to know the progress of individual projects within each tambon, and the specific causes of delays. At the changwat level, the ministry official may only need to know the rate of progress of all projects in his ministry, the major categories of problems causing delays, which projects are lagging badly, and in which amphoe are there the most serious problems. At the very highest central levels, it may be sufficient to know the rate of expenditure against targets, measure of progress in broad categories (infrastructure, employment, etc.) notable example of success, and major problems which need to be addressed on a policy level.

The most important point is that officials involved in rural development management at each level participate directly in helping to define measurements that are meaningful and useful to them. If this is done, a system will be defined that actually derives from and becomes part of their normal management activities.

A key to doing this is to keep in mind that different projects will have different problems. Early rains may be a critical factor to fish pond construction or bridge building but not important

as a problem indicator for saline soil or compost making projects. By allowing officials themselves to define the problem indicators that relate to their particular projects the resulting system is more likely to meet everyone's needs.

4.1 Information Requirements for Monitoring

Monitoring is a discrete part of a total management information system. But in order for monitoring information to be useful it must be integrated closely with other components of the overall system. The basic level of meaningful monitoring must be the individual project.

From the discussion of the purposes above it can be seen rather simply what information is required to effectively monitor the implementation of a project:

4.1.1 A budget for the project, broken down into its principal components, and the expenditure plan identified by time frame (allotment periods).

4.1.2 A listing of project inputs showing what the project funds will be used for (for example, building a facility, providing advice or training, or supplying materials or credit).

4.1.3 A set of outputs which show what is expected as a result of the inputs (for example, increased crop production, percentage of village children inoculated against disease, a village fish pond). These components are referred to as performance indicators. The outputs/performance indicators should be identified when the project is formulated, and should be explicitly made part of the project implementation plan when funds are budgeted for the project.

4.1.4 A time schedule, showing project activity completion targets.

With the above set of information, and a system of reporting and feedback, both the implementing agency and the concerned central staff agencies can effectively monitor the progress of implementation of a project, and the use of resources in doing so. Then, by monitoring the progress of implementation of a group of projects, concerned agencies can analyse the degree of achievement of outputs for a program.

The amount of detail required for monitoring at process varies a great deal. The monitoring of activities at individual project sites should be focused primarily at the amphur, because this is where most of the officials are based, who are responsible for supervising project implementation. To carry out

their job, those officials need to know in detail how well individual projects are progressing at particular locations. At successively higher levels -- changwat, department, ministry, NRDC -- the focus of concern is the entire project, not specific sites. The information system must be tailored to these different needs. The higher the level of reporting monitoring information, the more it requires summaries synthesis and interpretation of information. For management and policy levels, too much information in great detail, is a worse danger than too little.

4.2 Monitoring Findings

Discussion with field staff and central NRDC officials and our review of the present system components leads us to conclude that, at present, monitoring needs the most strengthening in the NRDP process and information system. With the exception of accounting for and monitoring the use of financial resources, the NRDP information system is not being effectively utilized for monitoring activities. The original Project Paper, the Monitoring and Evaluation Framework for the PAP, (prepared by Dr. Thanet), the DDMP Technical Assistance Team Final Report and Report on the Study and Experiment of the Provincial Development Planning, and the TDRI report have all noted the weakness in the monitoring process and have also noted many reasons why this part of the system is problematic. We concur with the conclusions reached noted in these reports. The

list below is an organization of these various conclusions expanded by our own findings.

4.2.1 **Monitoring is not viewed as a management activity.**

The overriding reason why monitoring is not currently an effective part of the NRDP is that it is not viewed at most levels as an integral part of management. Current monitoring activities are often viewed by changwat officials and department staff as a reporting obligation to BOB. Although there is evidence of individual departmental monitoring activity, generally monitoring information is not viewed as a tool to improve the efficiency of project implementation and performance. No matter what efforts are done to improve the monitoring of rural development projects, the process will only be successful if the persons who need monitoring information are involved in the design of the process, the data collection forms, and the monitoring reports. Contributing to the current attitude toward the monitoring process and monitoring information is a general lack of understanding of monitoring concepts and the purposes which project monitoring should serve.

4.2.2 Standardized project inputs, outputs, and timetables are not available. A monitoring process cannot work without clear, concise specification of project inputs, anticipated outputs, and timetables for implementation of project components in a standardized way across all projects. These items establish benchmarks against which to measure project performance. These benchmarks are not presently available for all projects in a standard format.

4.2.3 Current monitoring form is not useful or timely. NRDP monitoring reporting is currently done on BOB reporting forms (D314, 3D2). The time frame for use of these forms does not provide useful information to project managers in a timely manner which would allow them to take corrective actions where necessary. As a result some departments have developed their own monitoring forms and procedures. This has caused duplicative reporting requirements and in many cases has still not resulted in the integration of financial and physical progress indicators. We understand some work has been done on the development of a new process and form for monitoring NRD project performance both by NRDC and IPIED and, in a separate effort, by TDRI as part of their computer experiment in Surat Thani.

4.3 Recommendations to Strengthen NRDP Monitoring

4.3.1 Revise the monitoring framework. We suggest that NRDCC organize workshops or seminars in which officials at different levels and in different ministries can discuss monitoring information and problem indicators. The result of these workshops would be a set of monitoring procedures that all officials would feel was relevant. A system developed in this way would work more smoothly because officials would feel they had a part in designing it.

Specifically we suggest contracting with an individual experienced in the development of monitoring systems either on a personal services contract or as a special study. The scope of work for this project would be defined as follows:

- (1) Develop, organize, and lead seminars with selected officials at each government level (i.e. changwat officials, project managers, department managers, etc.) for the purposes of defining information requirements and timetables for monitoring.

(2) work with the Technical Assistance Team and NRDCC in organizing the data needs and timetables at each level into a process with data collection forms, timetables, and reports.

(3) Develop, organize, and lead further seminars of the same officials who participated in the first set of seminars for the purpose of review and refinement of the monitoring process.

(4) Design training modules for the purpose of disseminating the monitoring procedures throughout the country.

4.3.2 Develop monitoring models. After the monitoring process is defined and the information needs specified, models should be developed to coordinate monitoring information with policy, planning and evaluation information. This process should be initiated by NRDCC as part of its overall coordination function using consultants to provide technical expertise.

4.3.3 Develop performance indicators. Each department with rural development projects should be asked to develop for each project, performance indicators which include a set of inputs, anticipated outputs, and timetables for project implementation. These

performance indicators should be developed in a standardized format. This standardized format should be prepared by NRDCC with participation of selected department project managers. It is expected and that this development should be done slowly and carefully, and could not be completed in a seminar or workshop. However, a one day workshop could be used to instruct department officials and project managers in the process and in the required standardized output expected and to review the outputs of the process and to formalize the work when it is completed.

5. EVALUATION

As defined earlier, evaluation has a different purpose from monitoring. Evaluation is a process or system of measuring effects and impacts. Thus, the information requirements are somewhat different, though there are some common links. In evaluation, the concern is whether, or to what degree, a project achieved the effects that were planned and whether it had the impacts that were anticipated. Evaluation, in other words, is a process of measuring the effectiveness of a project.

In measuring effects the first level of evaluation is the immediate results of the project. When the project is completed, managers need to know whether it achieved its target effects within the level of budgeted resources (was there a decrease in the number

of children suffering from malnutrition/disease as a result of a particular health or nutrition project?) Project effects can be measured when a set of pre project conditions have been identified.

But there is another broader level of evaluation, and that is measuring impacts. This means, in other words, determining whether project effects had the anticipated impact on the community. For example, in the case of village fish ponds, what impact did the completion of the project have on the quality of life of the people in the village? Impact evaluation is used to determine both how a project caused changes in village conditions and to provide program feedback. Thus, it is important to assimilate both positive and negative results in future policy and planning efforts.

Clearly, it is very difficult to evaluate impacts. The reason is that often the impacts may be quite intangible, difficult to estimate in advance, and equally difficult to measure after the project is completed. Moreover, the real impacts of some projects may occur a long time after the completion of the project.

A final complicating factor is the difficulty in associating change in a village with the effects generated by one project, since many other variables may cause changes in village conditions. For example, farm-gate commodity prices, other projects in the village (REGP, NGO), and unusual weather conditions can all have an impact on village conditions which will blur the cause-effect relationship of one particular project or set of projects. These other factors

illustrate the problem of relying on routine reporting systems for conducting impact evaluations.

Because of these completing factors it is critical to project evaluation that baseline data be defined prior to project implementation. Such baseline data can then be used not only to show change, but also to isolate external factors which may affect project impact.

In summary, then, the purposes of evaluation in rural development can be listed as follows.

- (1) To determine the effects of completed rural development projects, both to assess the degree of attainment of original objectives, and to provide feedback for planning future projects.
- (2) To assess the total impact of projects and programs on rural communities.
- (3) To undertake financial and program analyses, in order to make cost/benefit comparisons in planning future rural development projects.

5.1 Information Requirements for Evaluation

From the above discussion, the basic information requirements for an evaluation process can be summarized follows:

5.1.1 The anticipated effects of a project (upon its completion) must be specific and measurable. These should be clearly described in the project plan.

5.1.2 A measurable set of preconditions relative to the project which can be compared with post-project conditions.

5.1.3 An estimate, or a description, of the anticipated impacts of the project in economic, social or environmental terms. As much as possible, these should be quantified so that the impacts can be related to the costs of the project. Where they cannot be quantified, proxy measures can sometimes be used.

5.1.4 A set of baseline data which will allow measurement of specific or overall change in the social, economic and/or environmental conditions of a village.

5.2 Evaluation Findings

We have previously noted several studies which have commented in depth on planning and monitoring processes within the NRDP. Surprisingly; very little has been written assessing the evaluation processes. In spite of the scarcity of formal

assessments, we found that the evaluation of rural development projects in Thailand needs strengthening in many of the same ways as monitoring; that is, training in the concept and use of evaluation, definition of precise targets for measurement, and involvement of project managers in the development of evaluation processes. Our formal assessment of the evaluation process follows:

5.2.1 Evaluation is not viewed as part of the management process. As with monitoring, the major focus for strengthening the evaluation processes should be to incorporate evaluation as part of the management process. Often evaluation in NRDP is viewed only as praise or criticism of particular projects. Evaluation information is not seen by project managers and planners as important feedback to be used to strengthen projects or to aid in subsequent planning activities. Part of the reason for this is a lack of understanding of evaluation concepts and its distinction from monitoring. Another part of the reason why there is little use of evaluation information in NRDP is that project officials have not been involved in the definition of evaluation measures, or in the definition of evaluation reports which would be useful to them.

5.2.2 Anticipated effects and preproject measurements are not always specified. The NRDP effect evaluation process lacks a clear, concise specification in the project description of anticipated effects and pre-project measurements against which the actual effects of projects can be measured. Local acceptance of a project has been used as the primary measurement, and this is an important part of effect evaluation, but it is only one measure. Also, the usefulness of local acceptance as a measurement of project effectiveness will vary across projects. For example, villagers may express acceptance of a fish pond, but if it isn't properly managed, protein consumption and income probably won't rise. On the other hand indicated acceptance of a vaccination project is more likely to mean villagers are getting vaccinated and that the project is having its intended effects.

5.2.3 Too much emphasis is put on having common evaluation measures. Much of the emphasis in NRDP effect evaluation has been put on having the same evaluation measures for each project. This practice will limit the measurement capabilities of the evaluation process to those measures that can be standardized across all projects and will not always produce useful evaluation of actual project effects. This practice will work for those projects with common anticipated effects -- for example, increased

protein consumption. In such cases, common effects measurements may produce the capability for comparable cost/benefit analyses. But it cannot be done for projects with different kinds of outputs and differing anticipated effects. To give an obvious example, consider the differing anticipated effects of a livestock inoculation project with a project designed to increase literacy.

5.2.4 Impact evaluation results not fully utilized.

Considerable effort has gone into the development of impact evaluation of rural development programs in Thailand. Although this impact evaluation was developed for evaluating the Rural Poverty Alleviation Program, the framework can, with some revision (to take into account the more diverse conditions and programs involved), be used in evaluating the impact of NRDP as it expands in the Sixth Plan to include the entire country. As with effect evaluation, however, thus far the impact evaluation has not been fully utilized. While it is true that impact evaluation is longer term and broader in scope than effect evaluation, it is vital to the policy and planning processes of NRDP. Currently, however, it is not recognized that both positive and negative results of impact evaluation should be utilized.

5.2.5 External factors not considered in impact evaluation.

As noted previously, it is extremely difficult to measure program impact, because of the external factors or events occurring simultaneously which may also influence the impact of a program. The program impact evaluation model developed thus far should be revised to take into account these external economic, social and physical factors. Statistical measurement of these factors should be included in future impact evaluations.

5.3 Recommendations to Strengthen NRDP Evaluation

5.3.1 Familiarize management level officials with evaluation techniques. Workshop or seminars should be held with project and other ministry/department officials to expand the utilization of effect evaluation in NRDP management processes. Increased utilization would occur by familiarizing officials with evaluation concepts and techniques and by involving officials in the definition of evaluation information which would be useful to them. Orientation in the use of evaluation in subsequent policy formulation and planning would also be part of these workshops.

5.3.2 **Specify anticipated effects and impacts.** Project managers should be asked to participate in developing clear, concise, measurable specifications of anticipated effects, impacts, and pre-project conditions. As in the specification of monitoring targets and outputs, the process of establishing these is likely to take time. Seminars and workshops could be utilized to provide orientation with follow-up seminars to finalize the process. Emphasis should be placed on specification of common effects where they are appropriate.

5.3.3 **Develop cost/ benefit models.** Cost/benefit models should be developed for use by NRDCC in its integrative role in rural development. These models would utilize budgetary information and the results of effect and impact evaluation. Results of the cost/benefit analyses should be used in subsequent policy formulation and planning activities. These models should be developed by a special study carried out by experts in rural development cost/benefit analysis. The expert/s should also participate in the workshops for development of anticipated effects and impacts and precondition measurements. Coordination of these two activities will help produce more reliable cost/benefit analyses.

5.3.4 **Expand previous impact evaluation work.** The impact evaluation work previously done by IPIED for the evaluation of the RPAP should be refined as needed and applied to the NRDP. It should be expanded to include more descriptive village profile changes and to isolate the impact of outside influences on changes in village conditions. We recommend that a special study be undertaken to identify and measure these outside influences and incorporate them into the impact study.

5.3.5 **Conduct on-site village impact studies.** We recommend that a special study be commissioned to conduct detailed on-site impact evaluations in a sample of villages. These studies should begin now and be carried out over the next five years. The purpose of this study will be to provide indepth analysis of NRDP impact by considering factors that might be missed in statistical survey analysis. This study should also examine changes in well being among village households as well as for the village as a whole. special study should be an interdisciplinary, interregional study. We recommend that a team of experts from the regional universities be asked to carry out the study.

5.3.5 Develop measures for "thresholds of poverty." To evaluate overall progress in rural economic and social conditions, we recommend that there be developed a set of measures which would represent "thresholds of poverty" for tambon. These would be basic measures of well-being, in living conditions, health, education, and income. They should be simple measures which are easy to understand, and general enough to apply all over the country. With these measures, and by use of data already collected -- in the BMN survey or NRD 2C -- an annual or biennial report of development progress could be produced which showed the number of tambon which had passed over these thresholds of poverty. This would not be a true impact report, because it would not attempt to tie change in conditions to a specific program. However, it would be a way to measure the overall pace of progress in rural conditions, and pinpoint those tambon where special attention is still required. We recommend that these thresholds be developed by an interdisciplinary team of experts in rural poverty identification, under a special study.

6. General Findings and Recommendations

We have previously divided our findings and recommendations into the policy, planning/budgeting, monitoring and evaluation

processes. There are, however, a few comments and recommendations which cut across the lines of these separate processes. This section will enumerate those findings and recommendations.

First, it is useful to summarize the information requirements for the NRD Program. Chart IV shows the information required for each function of the NRD Program which we presented in each of the previous sections.

6.1 Information Requirements Summary

The following chart clearly illustrates the need for common information across the various functions and emphasizes the importance of integration in the information system.

CHART IV

Summary of Information Requirements for NRD Program

Data and Information Required	Policy Formulation	Planning/Budgeting	Monitoring	Evaluation
Rural Conditions	Macro level data	Macro/Micro level data		Baseline data Preconditions
Indicators to differentiate level of need	Macro level data	Macro/Micro level data		
Programs/Projects available to meet needs		Project inputs Project outputs Project costs Guidelines Guidelines	Project inputs Project outputs Timeframe	Anticipated Project effects Anticipate Project impacts
Budget Level & Projections	Macro level level	Macro/Micro level Funding constraints	Macro/Micro level	Macro/Micro level

6.2 General Findings

6.2.1 Information system components need integration.

Previous development of and use of the rural development information system has focused on the collection of data and development of reports for the separate processes of planning, monitoring, and

evaluation. In fact planning, monitoring, and evaluation should utilize an integrated set of data. There is no point in monitoring and evaluation if it is not used as feedback to enhance subsequent planning. And both monitoring and evaluation measure achievement against targets set during the planning process. However, NRDP information systems to date have not utilized information from the various components in an integrated way.

6.2.2 NRDP data bases are not fully utilized. NRDCC and central department officials are relying mainly on routine and ad hoc reports for their information needs. Little use is made of NRDP data in on-line and batch mode. This is partly due to the way in which data is stored and partly due to the fact that data users are not aware of the options available to them. In addition these officials need training to fully utilize data access possibilities.

6.2.3 Changwat tools and capabilities for planning and monitoring need strengthening. The decision of the RTG to expand its RD planning/proposing system, together with the 6th Plan policy to decentralize to the changwat more authority and responsibility for RD planning decisions, will have profound significance for the direction taken to strengthen

and further develop the information system. We have considered these factors in our review of the present system, because they will have considerable impact on the direction of future changes in the system.

There is a clear need to strengthen the capability of the changwat to assume greater responsibility for its own planning and RD program decisions. One way to promote this is to give them improved tools to handle information. To do this they need a basic information system, and the means to make it work. NRDCC has recognized this need and is taking steps to develop plans to carry out this concept. The development of a changwat information system presents a good opportunity to bring about much greater coordination and integration of the collection and use of information for planning, monitoring and evaluation by the changwat. Plans are underway to develop a basic, standardized changwat information system for planning and monitoring.

6.2.4 Recent studies propose guidelines for changwat planning activities. A recent report of the DDMP project makes a number of concrete recommendations for improvement of the planning/program development process in the changwat, at all levels. It includes proposals for the format and content the changwat and district policy frameworks, and specific steps, forms

and manuals to carry out tambon, amphur and changwat plan preparation. There are manuals on data collection/analysis, and how to rank priority problems, and forms and instructions for use in analyzing data to identify and rank development problem. We have not yet had an opportunity to review the details of these recommendations, or analyze the forms, guidelines and instructions in the manuals.

The final report of TDRI for the UNDP project to study rural development organization and management includes manuals and detailed instructions for changwat amphur and tambon officials to use in carrying out rural development planning/programming and monitoring. While we have reviewed the summary report, we have not yet had an opportunity to study the contents of the manuals. We understand, however, that they are intended to provide guidance to local officials on how to work with the present system.

These and other studies have found that local government officials often have great difficulty in understanding the procedures and instructions contained in manuals and other documents. This occurs because of both the complexities of the procedures themselves the language used in the manuals.

6.3 General Recommendations for Strengthening of the NRDP Information Systems

6.3.1 Develop department information system models. We recommend that a special study be set up to explore and develop computer models for use in the departments at the central level which integrate planning, monitoring, and evaluation data. Those models would be developed by working closely with department staff utilizing data from the NRDP data bases and from internal department sources. This would best be done by selecting one department in each of the four ministries for intensive study and development. As work progressed, the four department models could be linked to form prototypes of integrated rural development models. The eventual purpose of this work would be expansion of the modeling techniques to cover all NRDP departments. Since the time required in each department would be quite extensive, we believe these models could be developed most rapidly by using 2 specialists in computer system design (each one covering 2 departments) with the Information Systems Advisor serving as the coordinator and the link to the national systems and models. We estimate this would require six months of computer specialist time.

6.3.2 Develop improved data access and storage methods.

To promote the utilization of NRDP data by central and field staff, we recommend that IPIED explore ways to improve on-line and batch mode data access. A variety of data storage systems should be explored so that departments can access data efficiently. Increased on-line and batch data access should also relieve some data processing burdens on IPIED. IPIED should also work with department staff to expand staff knowledge of the options available to them.

6.3.3 Develop a complete, simple changwat information system.

We recommend that plans for development of a standard changwat computer-based information system be supported and carried out as rapidly as possible.

Planning this system involves several steps:

- (1) Developing the overall system design and operating plan.
- (2) Selecting and/or designing the computer software and specifying hardware.
- (3) Training changwat staff who will use the system.

The first of these steps is most critical because it will establish what functions are to be performed, what are the user information

requirements, how the data needs for system components -- planning, monitoring and evaluation -- will be integrated, how user reporting needs will be met, and what output formats and frequencies are necessary. In carrying out this design process, we recommend that three particular guidelines be followed:

- (1) That the initial system be kept as simple as possible, and that it only attempt to meet the basic needs of the changwat for RD planning/programming and monitoring. A system which is too complex is not likely to be understood by changwat staff who are not familiar with the use of computers.

- (2) That the system be based on data and information needs defined by the users of the system. This requires careful, systematic definition of those requirements with participation of changwat management level officials -- those who actually do the planning and participate in the real program decision making. This step is crucial to the process; changwat officials will use the system if they believe it meets their real needs for information, which they have helped to define.

(3) That deliberate steps be taken so that the system design integrates the data base in such a way that common information is produced by the system for all the functions it may serve. Thus, it should be possible to use the changwat project file to both develop the changwat plan and to monitor project performance. The system design should also permit a comparison of the project file -- or any given components of it -- with the village problem indicators, or any grouping of them.

6.3.4 Conduct a workshop to coordinate findings and recommendations of DDMP, TDRI and RD/ME projects. Before any further work is done to study or revise changwat planning processes and the use of information at the changwat level, there should be a broader examination and discussion of the findings, proposals, and recommendations of these separate studies. This would help promote a wider understanding of the problems, and a wider consensus of the best solutions for strengthening the present system. To accomplish this, we recommend that a workshop/seminar be held with the participants in the three projects, joined by key representations from concerned agencies and changwat to assess the findings, conclusions and recommendations of the three projects. The purpose would be to compare findings, determine where consensus already exists

avoid any later duplication of effort, and establish what should be the basis for proceeding with efforts to strengthen the planning and monitoring processes. The results of this workshop could also be an important topic for discussion as the annual joint meeting of the donor agencies specified in the project plan.

6.3.5 Involve changwat officials in drafting instructions and manuals. In order to ensure that instructions and manuals for planning, monitoring, and evaluation activities are clear, precise, and understandable, we suggest that staff who will use the procedures be involved both in the development and testing of any new or revised instructions and/or manuals that are developed for the RD information system processes to be used in the changwat.

6.3.6 Workshop planning should follow specific guidelines. In preparing for the workshop and seminars which will be organized by the project, specific guidelines are needed to assure that they accomplish what is intended. In addition to a carefully prepared agenda, each workshop should have a clear set of objectives, so that the organizers know what they want to achieve in the workshop. To do this each workshop should be planned to include:

- (1) participants who are active and knowledgeable in the subject being considered,
- (2) background or discussion papers which concisely cover the topics to be considered,
- (3) a specific set of issues to be addressed and/or decided, with alternatives to be considered,
- (4) provision for small group discussion,
- (5) strong leadership, by officials who can help ensure that the workshop results will be used.

6.3.7 Support changwat system development activities in planning and monitoring. Because of the 6th Plan emphasis on decentralization, changwat planning and monitoring activities should be promoted and encouraged. We recommend that the RD/ME project support two types of changwat activities.

- (1) Innovative changwat officials should be supported with direct funding, technical assistance and/or special studies for activities that will enhance NRD information system development. We especially recommend support for activities which have the possibility of replication in other changwat.

(2) The computer project in Surat Thani should be supported both for further development and for replication. Funds for technical assistance and special studies should be first used for computer training and further operations system design in Surat Thani. After reaching a point where replication is possible, we recommend funding support for that replication in other changwat.

7. Summary of Recommendations

The existing information system for planning, monitoring and evaluation of the NRD program is built on a sound framework. That is the first and most important conclusion from this review. A great deal of work has been done by the government in building that framework, and in formulating the many detailed aspects of each component in the system. The second main conclusion is that, like most information systems at this stage of development, it needs strengthening and expansion. It would be surprising if this were not true. In fact, all large information systems require continual revision and updating.

The recommendations of this report are aimed at ways to carry out those revisions and updates -- that is, at ways to strengthen and expand the system. This updating of the system comes at a crucial time, for the government has made some important

decisions which require both greater reliance on an effective information system, and its expansion. The phasing out of the area-based RPAP, with villages pre-selected for special investment, together with an expansion of the coverage of the planning system to all rural development activities of the five principal ministries, has made the information system more important as a tool of management. Secondly, the 6th Plan stresses a policy of greater decentralization of decision making to the changwat in the rural development program.

The recommendations of this report are linked to the implications for the information system of these decisions. In addition, they reflect an analytic overview of the several components of the information system as it serves four basic functions: policy formulation, planning/budgeting, monitoring and evaluation. While the report includes a sizeable number of detailed findings and recommendations, they can be summarized and highlighted by the following:

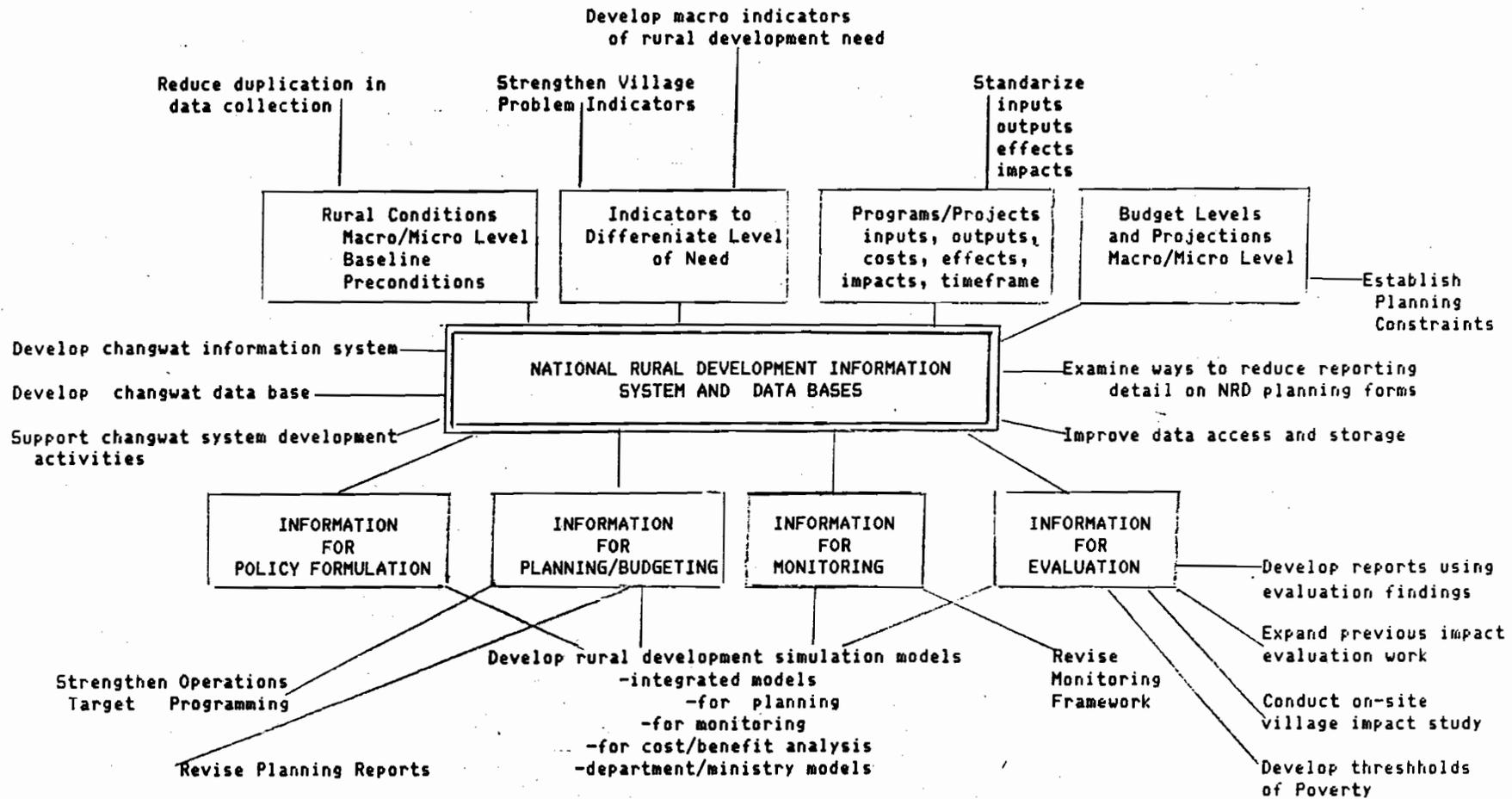
- 1) In working to strengthen the information system, more emphasis should be put on integrating the use of information. For example, the monitoring and evaluation processes should be built on the input and output targets of projects, which are specified in the planning phase. And the results of M&E should be fed back more systematically into the planning process.

- 2) In taking steps to strengthen and further develop the system, there should be considerable emphasis put on involving the users of the system. At the national level, this would include primarily the project managers and planners in the implementing departments, and the ministries. At the changwat, this would include the changwat governor and administrative office, together with the ministry representatives. By bringing these officials more directly into the process of identifying information requirements, they will be more likely to make greater use of the system.
- 3) More emphasis should be placed on expanding the use of the information system by the operating departments, and on further developing the system so that it meets their needs for particular information for planning, monitoring and evaluation in a more integrated way.
- 4) The development of the changwat information system, as a way of carrying out the 6th Plan policy of decentralizing decision making to the changwat, should be given a high priority in the further development of the NRD program. In undertaking this development, it is important that there be consistency in the basic system design, and compatibility in the operating system of the computing equipment used in the changwat system. This consistency and compatibility must be assured, while at the same time incorporating the specific information

needs of changwat officials into the systems design. without this, the system will not be effectively used.

The detailed findings and recommendations are described in the body of the report. The recommendations are also shown graphically in Chart IV on the following page, in relation to the four functions which are served by the information system.

CHART IV
SUMMARY OF RECOMMENDATIONS

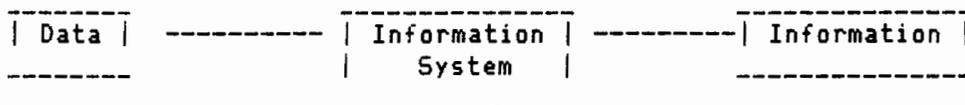


APPENDIX A

MANAGEMENT INFORMATION SYSTEM DESIGN AND CONTEXT FOR REVIEW

The concept of management information system (MIS) is a concept that has many meanings today. Before we began to define and evaluate the information system developed for rural development planning, monitoring, and evaluation in the RTG, it was necessary to define exactly what we mean when we use the words "information system" and other terms associated with information systems. The purpose of this appendix, therefore, is to provide those definitions and also to describe the framework used to evaluate the MIS in the NRDP.

One of the most common confusions that arises today is between data and information. Technically data is a collection of facts, figures, dates, etc., or even text. In most cases there is no relationship between these elements; they are merely descriptors. A data base is an organized collection of mutually related data elements. Usually data bases are defined in a formal manner and are controlled, either centrally or by the data base manager. Information is data that has been processed into a meaningful, useful context or format. The processor that transforms data into information is the information system. The following graph illustrates the relationship between data, information and information systems.



A system is used to transform data about an organization into information which will help make decisions for planning, managing, or operational control is called a management information system(MIS). Formally, then, a MIS is an integrated system which provides information that supports the functions of an organization. Today, most MIS's are computerized, but computer applications are not essential to the concept of MIS. What is important is that the MIS supports the plans, goals, and objective of the organization.

From this follows the most critical aspect about management information systems: the system exists only to serve the needs of its users. Users of MIS may encompass all levels of the organization. In the NRD program, the users of the information system include those involved in policy making and strategic planning in NRDC, NRDC, and the ministries; the departments who develop and manage rural development projects; and the staff of the central departments in the changwat who are responsible for the implementation and monitoring of projects. The NRD information system must serve the policy formulation, planning/budgeting, monitoring, and evaluation needs of all officials connected with the Program. In addition the system should be viewed by officials at all levels as belonging to them and serving their needs. Therefore, the information required from the system must be defined by these users at all levels. However, as in all MIS's, the NRD information system should be an integrated collection of diverse subsystems in order to meet the diverse needs of the users of NRD information.

What is a good information system? There is no absolute standard for defining quality in an information system. A system will be a good one only if it serve the needs of its users. There are, however, some common measures which can be used to help assess quality in an information system and whether it is relevant to the users of the system. They are:

1. Information provided must be:
complete,
relevant to their needs, and
accurate.
2. Information must be available in a meaningful, useful format.
3. Information must be understandable to users.
4. Information must be available selectively to intended users.
5. Information must be available in time for decisions and actions to be taken.
6. The system must be flexible and able to change as the objectives of the organizations change.
