

ISBN= 20636

GUIDELINES FOR TEACHING

LOGICAL FRAMEWORK

CONCEPTS

65

Prepared by:

Practical Concepts Incorporated (PCI)
1730 Rhode Island Avenue, N.W. Suite 200
Washington, D.C. 20036
(202) 833-1040
Cable: PRACTICON
Telex: 440068 PRAC-JI

PREFACE

These guidelines have been developed to assist persons responsible for providing training in the Logical Framework Approach to Project Management sections of these guidelines are:

Section One: The Logical Framework Approach to Project Design and Evaluation

Section Two: Objectively Verifiable Indicators

Section Three: Manageable Interest

Each section is divided into two parts. The first part is lecture notes which provide a narrative description of the concepts, highlights the key teaching points, provides examples which reinforce the concepts, and identifies questions frequently asked by trainees. The second part of each section illustrates presentation charts which can be developed to support the presentations. The charts have been numbered and are referred to by number in the narrative discussion.

The trainer should use this manual to increase his own understanding of the concepts prior to teaching. It should be studied until the trainer has a solid understanding of the concepts, and can present them to an audience in his own words, using expressions and examples that are comfortable to himself and the audience. The manual should not be read to the trainees, but instead be used for learning and reference by the trainer.

SECTION ONE

THE LOGICAL FRAMEWORK APPROACH TO PROJECT DESIGN AND EVALUATION

- A. LECTURE NOTES
 - B. CHARTS FOR PRESENTATION
-

A: LECTURE NOTES

TOPIC

Introduction to Lecture on Logical Framework Approach to Design and Evaluation (Chart #1).*

INTRODUCTION

This quote on the first chart "If you don't know where you're going, any road will get you there," is the key to the problem and the key to the way to solve it. Peter Drucker once said that management is the setting of objectives. This much is certain--if you have no objectives, then the relative value of any course of action cannot be compared to alternative courses of action. All courses of action, all roads, are the same--you're consuming resources, you're moving, but where are you going?

In 1969, to "discover where they were going," the U.S. Agency for International Development commissioned an analysis of its project evaluation system. That analysis uncovered three basic problems which were seriously hindering not only meaningful evaluation of projects, but also their implementation.

1. Planning was too vague: Objectives were not stated clearly and there were no indications of what the project would look like if it was successful. Thus, evaluators could not compare--in an objective manner--what was planned with what actually happened.

* Chart numbers refer to set of presentation charts attached at the end of these lecture notes.

2. The management responsibility was unclear: Project managers were reluctant to be considered responsible for development impact. The impact expected was ambiguously stated; there were too many important factors outside their control. They found it difficult to articulate what they should be responsible for, and ended up not accepting any responsibility. TOPIC

3. Evaluation was an adversary process: Absent clear targets, and frequent disagreement among project team members as to what the project was about--and frequently disagreement between donor and host--evaluators ended up looking for "good things" and "bad

things." Not surprisingly the reviews of evaluation results frequently ended up as an adversary relationship between project proponents and those who thought the "bad things" were important.

The Logical Framework Approach to project design and evaluation was specifically developed in response to the above problems. It encourages collaboration from the outset and thus avoids adversary relationships in both project formulation and evaluation.

Fostering "a clearly stated, explicit description of what will happen if the project is successful," clarifying what project managers should be responsible for accomplishing, and why.

* Principal architects of the Logical Framework Approach were Leon J. Rosenberg and Lawrence D. Posner, of PCIP (Practical Concepts Incorporated). The concepts draw heavily from science and experience gained from the management of complex spaceage programs such as the early satellite launchings, and the development of the Polaris submarine. Most importantly, the concepts help you apply basic scientific methods (including hypothesis formulation and testing) to project management and are complementary with other management tools.

3. Changing the focus of evaluation from "who is to blame" to "what is the most realistic plan for this project for the future based on the best up-to-date evidence available now?" This approach makes the project manager a primary user of evaluation results. The Logical Framework requires clear objectives and then bases evaluation on evidence. Evaluation becomes a tool to help the project manager, rather than a club that threatens him.

The Logical Framework was tested by AID in 1970 for evaluation of technical assistance projects. It was implemented in approximately 30 AID country assistance programs in 1970 and 1971. In subsequent years the Logical Framework Approach was extended to AID's loan projects and its centrally-funded projects. Canada's foreign aid agency (CIDA) tested the Logical Framework Approach in 1974 and in 1975 decided to apply it worldwide.

The Logical Framework Approach is taught now in government and academic institutions in the U.S, and in developing countries. * New applications are being developed. A complete Project Management System (PMS) was developed in Pakistan adding to the Logical Framework the use of "performance networking" for monitoring and reporting systems. In Thailand, PMS is being tested for adoption within Ministries. In Costa Rica, the Ministry of Agriculture and Livestock is doing Program Budgeting using the Logical Framework Approach. The Inter-American Development Bank plans to include Logical Framework in its "project preparation and evaluation" courses to improve management of feasibility studies.

LEARNING POINTS:

The Logical Framework Approach is a set of related concepts, which foster a way of thinking to develop a well-designed, realistic, and evaluable project. Uncertainty within the project is made explicit. Results of the process of using the LogFrame concepts can be displayed in a 4 X 4

logically setting objectives and steps leading to those objectives

* The Logical Framework is part of the graduate-level curriculum at three U.S. Universities.

matrix, providing a one-page, concise summary of major project elements and their relationships to each other. It is a process, not simply a paperwork exercise for filling in boxes. If this is forgotten, the concepts can become a bureaucratic requirement--a burden to project managers rather than an aid. The concepts can help us think through out project in an orderly, logical fashion and communicate clearly about the project to others. So, if the 4 X 4 matrix feels constraining, tear it up. It is the concepts that matter, not the size and shape of this matrix. However, the matrix adds a graphic, multidimensioned view of the project which, in itself, is a powerful aid to clearer communication.

REFERENCES:

These references apply to the total concepts:

1. Agency for International Development, Project Evaluation Guidelines, third edition, M.O. 1026.1, Supplement 1, AID, Washington, D. C. May 1974.
2. Drucker, Peter F. Managing for Results
3. Practical Concepts Incorporated, Practical Concepts for Research Management and Evaluation, 2nd Edition, PCI, Washington, D. C., 1974
4. Rosengerg, Leon J., Hageboeck, Molly. Management Technology presented at IFAC/IFORS Symposium, May 28-31, 1973, Algiers, Algeria (ISA Reprint).
5. Agency for International Development, AID Handbook No. 3: Project Assistance, 1975.

TOPIC:

Summary of What LogFrame Is (Chart #2).

INTRODUCTION:

The most important single concept in the Logical Framework Approach is separating "means" from "ends."

LEARNING POINTS:

The Logical Framework Approach forces the intellectual discipline to distinguish between what we can accomplish (outputs), and the impact we expect to achieve (purpose). We can build rural health clinics, with trained staff and well equipped with medical supplies (outputs); we expect this will result in effective health services actually being delivered to the target population, bearing in mind that the target population may not come to the clinics, supplies may not be maintained, doctors may not want to keep working in rural areas, etc.

The "output" and "purpose" level objectives can both be stated in clear, unambiguous terms. Instead of trying to "build some clinics," we say the outputs are "six 15-bed clinics built by 1978 in each of six target areas."

Stating explicitly what you are going to do is useful for deflating rhetoric and forcing realism in project designs. We agree in advance about what we can do and are therefore willing to try to accomplish. This reduces tension because we know we are to be held accountable for agreed reasonable targets. The alternative is illustrated by the example of a project manager responsible for improving the health of the 800,000 people in a region of his country.

This was such a big task, he preferred vague targets because he know he couldn't do miracles. But, if we were asked to be responsible for building a clinic, he would know this was something he could do, and therefore he would probably more willingly accept responsibility.* Specific targets of how big the clinic should be and when it should be built would be helpful to him.

So the Logical Framework, by making this clear distinction, can help you as a project manager set objectives that you can realistically achieve and at the same time make it clear that there are important, higher level objectives you hope will result.

And as an administrator or as a reviewer of projects, you can use the Logical Framework to come to clear agreements with your project managers as to just what their responsibilities are and how they relate to your higher level objectives.

It is important to note the LogFrame concepts are neutral. They do not make decisions but merely reflect decisions. Their correct use raises important questions about projects--how the questions are dealt with is up to the designers. The LogFrame cannot prevent illogic and badly designed projects--but it makes it a lot easier to detect the errors. Note also that a Logical Framework design is not an evaluation in itself; it provides the clearly stated plan of the project against which project progress can be assessed by the evaluators.

QUESTIONS TO ANTICIPATE: (AND SUGGESTED ANSWERS)

1. The LogFrame only appears to deal with short term projects?

* Even then, people will still be reluctant to accept responsibility. Someone once said, "If I make it clear exactly how many beds and nurses there are going to be in each hospital, then I can fail at what I'm doing here. If I miss those targets, then I've failed."

You put the dates in--it can deal with any length project. However, beware of a very long project--it is quite probably a program, with several project components. However, if you have a project that lasts many years, in order to manage it you probably need to set interim targets, using the Logical Framework concepts to make it clear where you expect to be each year or every two years.

TOPIC:

The hierarchy of results from a project: GPOI (Chart #3).

DISCUSSION:

Before we go any further, I would like to pause here and briefly discuss some of the key words which go to the heart of the LogFrame concepts. These are words you no doubt are familiar with in other contexts--input/output models; "goal" and "purpose" have been used interchangeably. However, for discussions of project design--at least during this seminar--we will ask you to use words with a precise and specialized definition.

LEARNING:

1. Specialized definitions: as per chart.
2. These are more than just words--they indicate levels within the project hierarchy--all projects contain this hierarchy. As we progress up the levels the type of result becomes more important but uncertainty about our ability to achieve the results decreases.

EXAMPLES:

See the following two pages. It is important to use a simple example that all the participants can relate to--and a little frivolity will not hurt--especially when followed by a more serious example. You should probably introduce the idea of causality, but not necessarily use the term hypothesis.

QUESTIONS TO ANTICIPATE:

How do you define the Goal? How can project designer(s) decide what goal he wants?

EXAMPLES (Illustrative but frivolous):

	1	2	3
GOAL	Personal income increased	Nobel Prize for Science won	Family name continuity assured for generations to come
PURPOSE	Profitable import/export business operating 100% self-owned	Sunshine converted into cheap, practical form of energy	Son marries girl with six brothers
OUTPUTS:	<ol style="list-style-type: none"> 1. Competent manager hired. 2. Market study performed. 3. Shop in good location established. 4. Good supply of stocks maintained. 	<ol style="list-style-type: none"> 1. All other efforts in this area completely inventoried and causes of failure catalogued. 2. Lines of communication opened with all others working on this problem. 3. Experiments conducted with at least 3 different approaches. 	<ol style="list-style-type: none"> 1. Five eligible girls found with at least six brothers each. 2. Candidates introduced to son. 3. Son promised large house and substantial dowry if he weds one of the young ladies.
INPUTS:	<ol style="list-style-type: none"> 1a. Advertise for manager. b. Interview and select. 2a. Hire-marketing contractor. b. Study results. c. Make decision on goods to sell. 3a. Research all possible locations. b. Visit shops and talk with previous owners. c. Match site with results of market study. d. Buy store. 4a. Inventory stocks. b. Develop system for ordering supplies. c. Train inventory clerks. 	<ol style="list-style-type: none"> 1a. Analyze all available literature. b. Maintain accurate records and update analysis as necessary 2a. Research who are other workers in this field. b. Write to them about their research. c. Maintain contact with researchers. 3a. Select experiments. b. Obtain materials. c. Conduct experiments. 	<ol style="list-style-type: none"> 1a. Advertise through marriage bureau, and inform all neighbors. b. Interview and check families of candidates. 2a. Large party held for son. b. Only invite candidates and married couples. 3a. Inform son of hopes and incentive. b. Be sure money in bank!!

EXAMPLES (More serious):

Example 2

GOAL:	Reduced illiteracy rates	Increased balance of payments surplus
PURPOSE:	Improved school system effectively operating	Increased production of tulips for export
OUTPUTS:	<ol style="list-style-type: none"> 1. New schools built 2. Teachers trained & on the job 3. Old schools renovated 4. Curriculum revised 	<ol style="list-style-type: none"> 1. Disease prevention measures efficiently applied. 2. Irrigation ditches and dykes completed. 3. Fertilizer applied as appropriate.
INPUTS:	<ol style="list-style-type: none"> 1a. Design schools b. Hire contractors c. Obtain furnishings and equipment 2a. Plan teaching curriculum b. Recruit and train potential teachers 3a. Inventory schools that need renovation b. Prepare designs c. Local contractors do renovation 4a. Analyze problems with current curriculum b. Develop new curriculum outlines c. Test new curriculum and revise d. Finalize and print curriculum and new texts e. Circulate to schools 	<ol style="list-style-type: none"> 1a. Inventory existing use of disease prevention measures b. Plan training courses c. Hire adequate staff where necessary 2a. Design ditches and dykes and install 3a. Order fertilizer supplies b. Distribute to all tulip growers c. Followup with ag extension agent visits to ensure correct application

TOPIC:

Key Concept--Linked Hypotheses (Chart #4).

DISCUSSION:

We have talked about progressively superior levels of results within the project hierarchy. Now, let's look at the relationship between these levels.

LEARNING POINTS:

1. The project hierarchy is not accidental--there is a definite cause and effect relationship between any level and the level immediately above it.
2. By recognizing this natural, orderly progression of successive cause and effect relationships between the project levels, and making them explicit, we can more-effectively plan a project and subsequently evaluate it.
3. However, we do not have perfect information about cause and effect. Therefore, we cannot state these relationships as fact, but our experience tells us the sort of results that should occur if we do certain things and so we can state these relationships as hypotheses--we hope these hypotheses are correct, because then our project should succeed. On the other hand, we are alert to the possibility that our hypotheses are not correct. We are after all, applied social scientists. We are alert, receptive, and open to feedback suggesting that our hypothesis was wrong. And remember if we prove our hypothesis wrong we have learned a lot. We may have saved millions of dollars in that we can divert resources

from projects that won't succeed, to those that will. And it's not just our own projects, but it may be projects of others.

TOPIC:

What is an hypothesis? (Chart #5). *Prediction that an event will occur if certain things are done and certain assumptions are*

DISCUSSION: *true*

As the concept of a hypothesis is central to the LogFrame way of thinking, let us take a moment to review what it is.

LEARNING POINT:

1. Definition: As in chart.
2. Its value is in (a) separating levels of results and thus making project logic clear and explicit, and (b) helping us to focus on areas of uncertainty--and to deal with that uncertainty, rather than ignore it in the hope that it will go away.
3. There is a danger of not separating out different levels of results: Warning signals that this is happening are the following:

Clues indicating that two or more levels of results into one are conjunctions that indicate causality or motivation.

- We will do ----- / in order to achieve -----
 - We hope to achieve this ----- / by doing -----
 - If you could just make ----- / then this would result -----
 - By doing ----- / we should be able to -----
 - The objective of this project is to ----- / to ----- / to ----- / by ----- / which should ----- (several hypotheses in one sentence)
 - Through doing ----- / we hope to achieve -----
- Etc.

TOPIC:

Example of Vertical Logic (linked hypotheses--lead in to assumption)
(Chart #6).

DISCUSSION:

Here we have an example of a project where the linked hypotheses have been made explicit. We are hypothesizing, for example, that if we can produce this set of outputs (name them), then we should achieve this purpose (name it).

LEARNING POINT:

1. Illustrative example to reinforce concept of linked hypotheses--leads into assumptions by noting that some important factors are obviously missing.
2. Uncertainty increases as we climb the project hierarchy and so it becomes increasingly important to identify the critical aspects of each link between levels--those within the project and those outside the project control.

QUESTIONS TO ANTICIPATE:

1. What is the difference between an assumption and a hypothesis?

An "important assumption" is defined as a factor necessary for success of the project but outside the project. The "hypothesis" at each level of a well-designed project is that (a) all items in the project are

necessary to achieve the results at the next higher level, and (b) items inside the project plus the assumptions made explicit about factors outside the project will be sufficient to produce the results at the next higher level.

*dispersed at
this point.*

TOPIC:

Assumptions (Chart #7).

DISCUSSION:

We have been talking about uncertainty in a project. Uncertainty comes from (a) our lack of knowledge of all the variables necessary to effect the important changes we want and (b) our doubts that we can influence or control certain of the variables that we have been able to identify. When we implement projects we hope to be successful, and also to learn more about why we were or were not successful. In this way we can increase our knowledge of how to effect change.

LEARNING POINTS:

1. Assumption definition: Those factors (or variables) outside the project control, but necessary and sufficient for project success. It's often useful to relate to other people's jargon--note that assumptions are equivalent to what statisticians call exogenous variables. But our assumptions are associated with specific levels of the framework and thus we explicitly identify the dependent variables that will be directly affected.
2. Identification of necessary and sufficient conditions at one level in order to achieve the next higher level, i.e., a simple hypothesis, is not enough--"if-then" is too simplistic. We must say "if (we do this)" and certain other things occur--or do not occur as the need may be--then (that will happen). Without the "and" portion of our "if-then" statement, our hypothesis is not complete.

3. Identify key assumptions, not every possible one.
4. Use assumptions for focusing management attention on the weakest areas of the design. (A project is as strong as its weakest assumption.)

QUESTIONS TO ANTICIPATE:

Why is it important to make assumptions explicit?

What is the difference between the hypothesis and the assumptions?

How do we decide which assumptions to make explicit and which to ignore?

What do we do with assumptions once we have got them?

If an assumption is really important to the project, do we just let it sit in the assumption column?

When can I stop worrying about whether I have identified all the necessary assumptions?

To what level of detail should I refine an assumption?

What should be done about an assumption that is important, necessary, and unlikely to happen?

TOPIC:

Assumption Example (Chart 8)

DISCUSSION:

Let's look at an example where the assumptions have been identified-- in this agricultural project.

LEARNING POINT:

1. Reinforce concept of "necessary and sufficient."
2. Demonstrate how to review assumptions and the options available for dealing with them.
 1. Review--assess probability and degree of criticality of each assumption.
 2. For each assumption (especially low probability assumptions) consider alternatives:
 - a. Consider implications of abandoning project.
 - b. Consider risk and benefit from continuing the project without change.
 - c. Bring assumption into project--i.e., provide funds and level of effort necessary to make it an output of the project (use irrigation assumption for discussion).
 - d. Make decision on how to proceed.

(There are always alternatives when considering assumptions. If you know they are not likely to occur, and they are important enough in terms of expected impact, and an assumption is a bit risky--you might still be

willing to take the risk because the expected payoff would more than outweigh the risks being taken. As always, this is a question of judgment; the Logical Framework assists the decisionmaker--it does not make the decisions.)

TOPIC:

Key Concept--MANAGEABLE INTEREST AND THE DEVELOPMENT HYPOTHESES
(Chart 9)

DISCUSSION:

We now come to a key concept--and probably the most important from a project manager's point of view--that of the manageable interest.

This concept is based on the recognition of a difference in kind between the input-output hypotheses and the output-purpose and purpose-goal hypotheses.

The uncertainty for "outputs to purpose," and "purpose to goal" is much greater than the uncertainty for "inputs to outputs." Our collective experience for inputs to outputs is much greater and when we plan a project, we can be more confident of our ability to produce output level results (not positive, just more confident).

LEARNING POINTS:

1. Input/output hypothesis is different in kind to the output/purpose and purpose/goal hypotheses.
2. This is where we divide the project between (a) can do and (b) hope to achieve:
 - a. Role of manager
 - b. Role of scientist.

3. Point 2 above is extremely important perspective to bring to project design. The project manager can wear both hats at different times. In day-to-day implementation he is the manager; but he must step back from his project every now and again and be the scientist--testing and reviewing the hypotheses to see if he is going where he wants to go.
4. Point 2 is important because it results in project with more realistic expectations and gives manager more realizable and specific task(s), thus clarifying his role and responsibilities.

For the "output to purpose" and "purpose to goal" links, we are like scientists experimenting in our laboratory. For the "input to output" hypotheses, we are project managers, committed to producing the outputs and reasonably confident of our ability to do so. Of course, our "laboratory" is the world--the real world where people farm, buy goods, eat, get sick, have children, etc.

EXAMPLES:

1. We know how to put bricks together to build a building; and we know we can train teachers.

However, we are less confident that the teachers can produce well-educated children--witness the decreasing levels of writing ability in the U.S. Outside factors--peer group, the general contempt for education as an art, etc., and many other unknowns--have affected this, no matter how competent our training for the teachers.

2. We can teach people how to take care of cattle; and we can grow better grass.

We cannot guarantee the grass will grow; that it will rain enough; etc.

So we are less certain of our ability to produce healthier, fatter cattle.

QUESTIONS TO ANTICIPATE:

How can a planner know what is manageable--even if he tries to wear a manager's hat?

If a project manager isn't assigned until after project is designed and approved, what can he do with a fuzzy project?

TOPIC:

The Purpose: as the Central Focus for Management (Chart 10)

DISCUSSION:

We have just talked about the manager being responsible for producing outputs but his responsibility and knowledge of the project should not stop there--he must know what the purpose of the project is and share in the technical judgment that the outputs will result in that purpose. As he labors to produce his outputs, he will constantly keep focused on the purpose to ensure relevance and timeliness of the outputs.

But the project manager doesn't select the purpose on his own. Higher management determines why a project should be undertaken. Top management sets policy and judges the goals needed for their programs. Then they determine, from among several alternative projects (i.e., purposes) which will be most likely to lead to achievement of the goal.

The design and technical staff must then determine how the project can best be designed to achieve that purpose. The dialogue between top and middle management during this process hinges on the purpose--the main thrust of the project. It will be a shared judgment that the development hypotheses (output-purpose, purpose-goal) are realistic enough to warrant proceeding with the project.

LEARNING POINTS:

1. Policymakers and project technicians use the Logical Framework process to ensure a "meeting of the minds" focused at the purpose level--ensuring no surprises at a later date.

2. Goal and purpose determine the why of the project; input-output-purpose determines the how.
3. The development of the measures of success at each level--particularly purpose--ensures the "meeting of the minds" is based on specifics and not imagination.

QUESTIONS TO ANTICIPATE:

You talk about dialogue--we are usually just told what to do; how can we, at the middle and lower levels, ask top management to include us in their judgment procedure?

If we make a suggestion, top management thinks we are criticizing them rather than trying to improve the project; what can we do?

REFERENCES:

1. Management and Machiavelli: An Inquiry Into The Politics of Corporate Life, by Anthony Jay.

TOPIC:

Key Concept--END-OF-PROJECT-STATUS (EOPS) (Chart 11)

DISCUSSION:

In order to ensure full agreement on what a project purpose really means we have to step back from the project for a moment and ask ourselves "what will we see at the moment we can call our project a success?" If you shut your eyes and visualize all your work done, what should be happening?

Suppose you have a project the purpose of which is to ensure tomato growers have a good income by 1980. Shut your eyes: now, it is 1980. Can you see boxes of ripe, red, tomatoes in the marketplace with housewives wishing to buy them? The cash registers are clinking, no one is complaining about spoiled tomatoes, and best of all, the farmer is going home with coins jangling in his pockets, or buying new pots and pans for his wife, a dress for his daughter, and a month's supply of feed grains. Can you see this farmer multiplied by hundreds? So, the project purpose remains the same--"farmers have a good income"--but now we can define what we mean by using specific measures, or indicators, that will signal success to us. 400 farmers will earn an average of 300 coins a month (300 coins being enough to buy that bag of grains, some household essentials and perhaps a needed item of clothing or so, as well as pay back old debts, etc.). So now we can specify something more precise than just "a good income," and this is what we mean by End-of-Project-Status.

So, for every project, as early in the project development stage as possible, we must ask the questions:

"What constitutes success?"

and

"How will I know when I have it?"

The concept of EOPS is based on a project having a clearly defined end. This does not mean just when we have spent our money, but when we have achieved a specified objective which can be defined by the indicators we will use to signal that achievement. Good management should ensure that completion of the objective coincides with the money and time constraints allotted to the project.

LEARNING POINTS:

1. Projects must end: projects are defined as an interrelated set of activities aimed at a clearly stated objective that must be achieved within given set of time and cost constraints.
2. The conditions that signal successful completion of the project should be defined in advance--to ensure that agreement on project intentions is based on clear and objective understanding of the project.
3. The conditions that signal success are called indicators.
4. These indicators lay the ground rules for subsequent evaluation--evaluators will evaluate against clear project intentions rather than relying on their own interpretation of what the project is all about.

5. Process of defining EOPS is the most important in the whole LogFrame. It should be utilized to ensure many key questions about the project are asked.

QUESTIONS TO BE ASKED IN EOPS FORMULATION

1. Are we building an institution or creating a one-time effect?
2. Are we creating a stream of benefits which will continue when the project ends?
3. Are we creating a state of dependency (e.g., subsidy programs) or are we building up local self-sufficiency?
4. If we are creating a situation of self-sufficiency, what indicators will show that? Are we talking about local government managing aspects of the project, paying for it out of local funds, or that it is showing signs it can pay its own way?

EXAMPLES:

See chart No. 12 for health example.

QUESTIONS TO ANTICIPATE:

Why do you mention three or five years for a project? Can you have 20 years?

TOPIC:

EOPS Health-Related Example (Chart 12)

DISCUSSION:

Indicators help us to be more concrete.

LEARNING POINTS:

1. Indicators improve clarity--and thus lead to better communication. To illustrate this point, lecturer should cover the indicators and ask people to just look at narrative statement; then focus attention on indicators and note how these add clarity and dimension to the narrative statement.
2. Provide basis for evaluation.
3. EOPS definition facilitates development of appropriate outputs in terms of quantity and quality.

Chart can be used to ask audience what type of outputs they think would be necessary for this project--then illustrate how using indicators at purpose level gives clues about the type of outputs you will have to include, e.g., outputs:

1. Emergency facilities constructed.
2. Ambulance vehicles equipped with two-way radio.
3. Administration staff trained.

4. Medical staff trained
5. Operational procedure manual written.
6. Etc.

These are essentially different in kind from the EOPS indicators--
a point that can be used to lead into the next chart.

TOPIC:

Independent Measurement at Different Levels (Chart 13)

DISCUSSION:

Here we have an example of indicators being used at two levels in the project: Outputs and purpose. Note the difference in these indicators.

LEARNING POINTS:

1. Indicators at a lower level cannot be used as proof of achievement at a higher level--because the "if" statement doesn't automatically lead to the "then" condition. The "if" will cause the "then," but just knowing we have the "if" in place does not guarantee the consequent existence of the "then."
2. Confusion of EOPS and outputs is one of the most common errors--be on your guard against it.
3. Questions to ask to prevent confusion are:
 - a. Are the EOPS indicators the same as the output indicators? If the answer is "yes," then it is probable that the EOPS indicators are incorrect.
 - b. Are the EOPS indicators necessary in order to achieve the purpose? Again, if the answer is "yes," the EOPS are incorrect. EOPS should measure purpose achievement, not the things necessary for achievement.

TOPIC:

Objectively Verifiable Indicators (Chart 14)

INTRODUCTION:

Indicators are used to add precision to goal, purpose, and output levels. At the input level the indicator column shows "level of effort" in manpower and cost for each major activity. This forces realism about input activities that must occur within the specified time and cost constraints for producing outputs.

LEARNING POINTS:

As in chart.

EXAMPLE:

Purpose: Improve education by 1980.	OVI: 80% of all 1980 high school seniors receive "B" or better on their final exams, compared to only 50% in 1976.
-------------------------------------	--

TOPIC:

Means of Verification (MOV) (Chart 15)

DISCUSSION:

Having defined the indicators we will use to measure our success, we are then practically obligated to ensure that, when the time comes, we will in fact be able to collect data for the selected indicators. If we cannot, the indicator will not be useful for evaluation. Thus, during the design phase it is essential to raise the question of data availability--or the "means of verifying" whether or not the indicator of success occurred.

If the data is not available or is too expensive and time-consuming to collect, we will have to search for a practical alternative indicator(s) to substitute for the theoretically "best" indicator while still measuring the important aspect we need to measure.

LEARNING POINTS:

1. Means of Verification are the sources of data required to verify progress or lack of progress.
2. Can include method of obtaining data.
3. Without reliable MOVs, indicator is not useful.
4. Asking questions about availability and cost of MOVs can lead to reduced costs--can build into project necessary data gathering activities.

EXAMPLES:

Indicator	MOV
1. Middle management government salaries in line with private industry by 1980.	1a. Government Civil Service lists. 1b. Private industry annual reports to Department of Commerce.
2. 300% increase in rice production by 1981 compared with 1976 production levels.	2. Department of Agriculture records for 1981 harvest compared to harvest records for 1976.
3. Small farmers in NW region receive average income of 1,300 coins a year by 1980.	3a. Tax Department records of income taxes. 3b. Survey of sample of 100 farmers in NW region.

QUESTIONS TO ANTICIPATE:

How many Means of Verification do you need?

Who collects the information--what do they do with it?

What level of detail is needed?

When do you have to add the cost of MOV into the project?

How does it save money to think about MOV ahead of time?

TOPIC:

The Horizontal Logic: Using Indicators and Means of Verification to Foster Clear Targets and Realistic Projects. (Chart 16)

DISCUSSION:

The horizontal logic is an "iterative process;" you repeat the process as many times as necessary to refine the project until it truly reflects what is intended and all parties agree about it. This effort implies collaboration between technical staff and evaluation staff.

LEARNING POINTS:

1. LogFrame development process is "iterative"--making successive refinements.
2. Change in one part of the design may imply change somewhere else in the project design--in one or more places (e.g., changing the purpose may imply different outputs and inputs; changing indicators may facilitate data collection in Means of Verification).
3. Be mentally prepared to accept that this is a iterative process; the changes that increase understanding and insight into the project should be welcomed.

QUESTIONS TO ANTICIPATE:

You could go on forever and never get started on the project; at what point do you stop changing?

TOPIC:

Vertical Logic: Iterative Process for Program Logic (Chart 17)

DISCUSSION:

- Project design begins with a roughing out of the project idea; we recommend a top-down approach deriving necessary conditions.
- Usually start with a program (or goal) level objective; need to clarify what it is; then derive the appropriate purpose, outputs, etc.; and the key assumptions--move to indicators as soon as possible.
- Then refine the design to ensure the linkages are sound (sufficient to produce results at the higher level), clarifying still further the indicators and setting targets.
- REITERATE AS OFTEN AS NECESSARY

This will involve higher management (for judgments on why) and project designers (how) with technical knowledge (is it reasonable?) and evaluation staff (objective, clearly stated plan with indicators and MOVs plus logical linkages, etc.).

LEARNING POINTS:

1. Concepts are interrelated--changes in one area may require corresponding changes elsewhere.

2. Focus is on designing a realistic project that will succeed by gaining real insight and understanding about the project; this will foster willingness to change and improve design as new factors are recognized.
3. All parties needed for the project should be involved in design phase if possible--this will help smooth the path for future project implementation.
4. Open discussion and changes on paper can reduce number of later changes to project after implementation has begun.

EXAMPLES:

1. In seminars in Brazil, Costa Rica, and Tchad, comments were made on how useful Logical Framework was to work collaboratively for organizations that do not collaborate together often. The Logical Framework Approach seemed able to encourage cooperation in the best interests of the project itself by focusing attention on the shared objective.

TOPIC:

Alternatives (Charts 18 and 19)

DISCUSSION:

- There are usually alternative approaches for achieving the next higher level objective--and the discipline of the LogFrame Approach can help foster consideration of alternatives because it differentiates between the project levels.
- A change in one level of the LogFrame has implications for the levels either above, or below, or both.

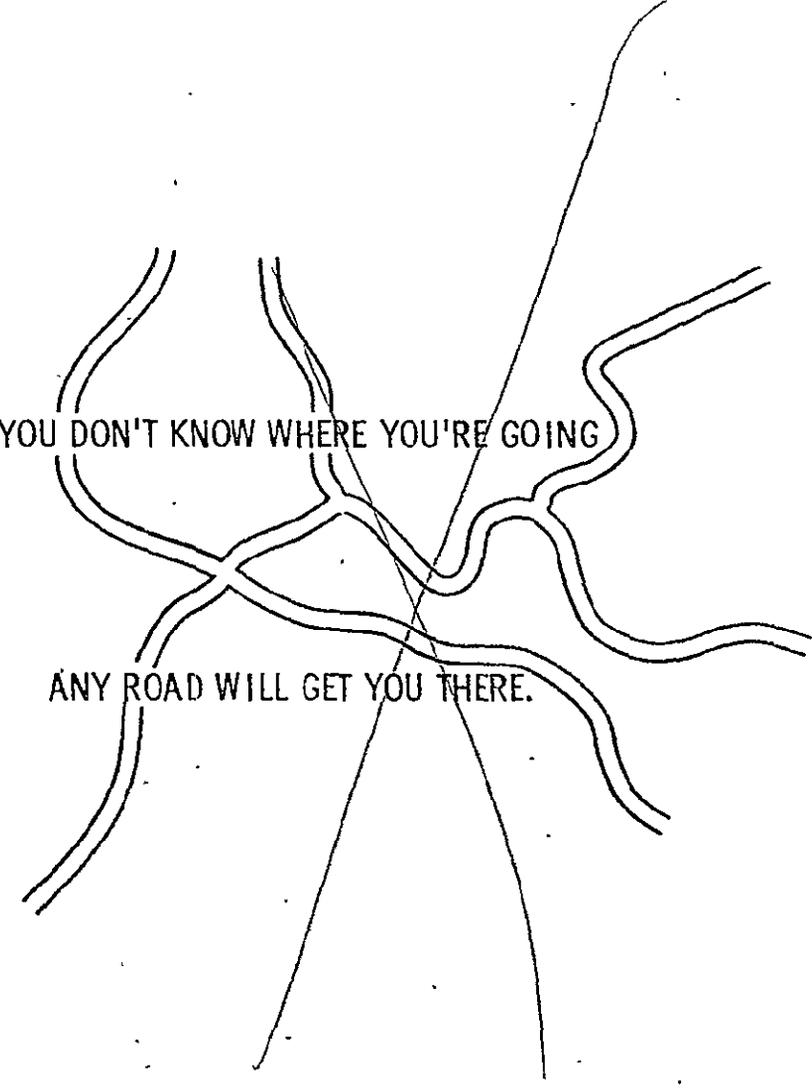
This is true not only in initial design efforts, but also in replanning efforts. Here is a real evaluation/design effort using the Logical Framework Approach. The purpose of this project was to eradicate malaria; the Ministry technicians evaluated the project and decided the project had not succeeded in eradicating malaria but it had succeeded in bringing malaria down to a level tolerable for colonization to take place. The Ministry technicians suggested to the Minister that the level of effort in the project be reduced from that required for eradication to a lower level required to control the malaria and keep it at the current tolerable levels. The Minister wouldn't hear of any change in the level of effort--he wanted the project to continue the way it was. After some dialogue and further questions, it became clear the Minister did not want to change the project because he wished to maintain a government presence in the area--well, this of course clarified the real goal considerably (i.e., not colonization) and opened up the discussion to a question of alternative purposes;

clearer understanding of the real goal enabled the technician to suggest another alternative--such as a rural health program with mobile health teams visiting the rural population--which could accomplish the goal of "government presence" while providing something of more immediate value to the people.

LEARNING POINTS:

1. There always are alternative approaches.
2. Changes at any level will make possible new alternatives at the levels below.

B. PROJECT DESIGN & EVALUATION CHARTS FOR PRESENTATION



IF YOU DON'T KNOW WHERE YOU'RE GOING

ANY ROAD WILL GET YOU THERE.

*write
on blackboard*

THE LOGICAL FRAMEWORK:

CLEAR STATEMENT OF:

- WHAT WE CAN ACCOMPLISH (OUTPUTS), AND
- THE IMPORTANT RESULTS WE EXPECT (PURPOSE).

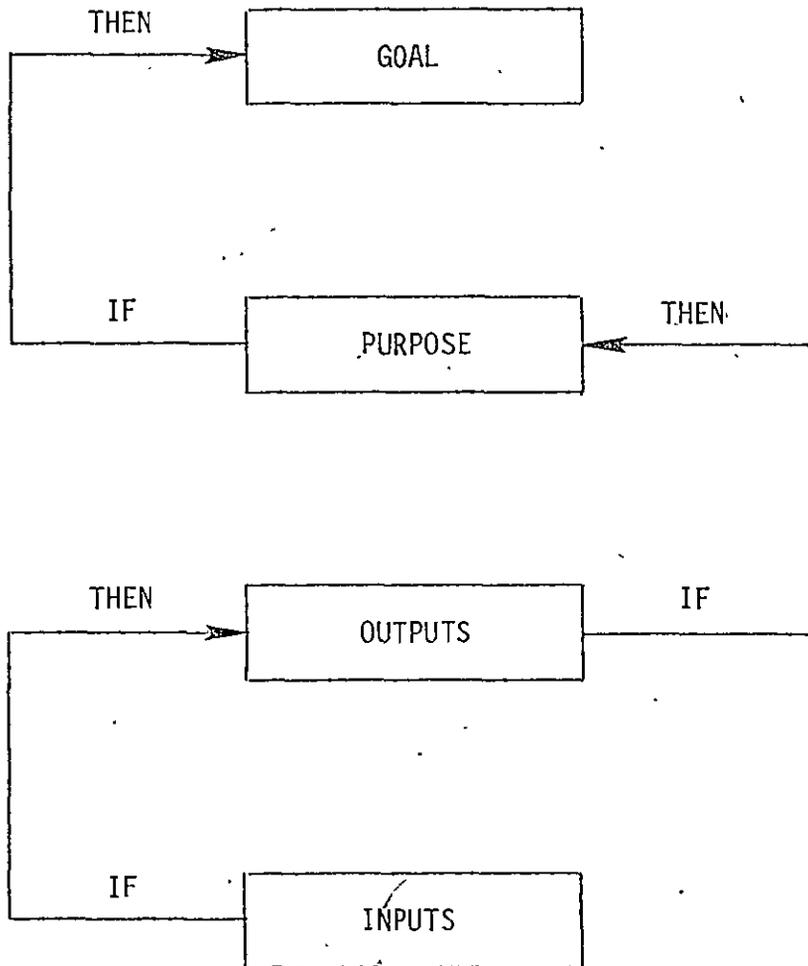
CONSISTENT WITH EXPERIENCE, INTUITION,
GOOD SCIENCE, AND GOOD MANAGEMENT.

3

HIERARCHY OF PROJECT EXPECTATIONS

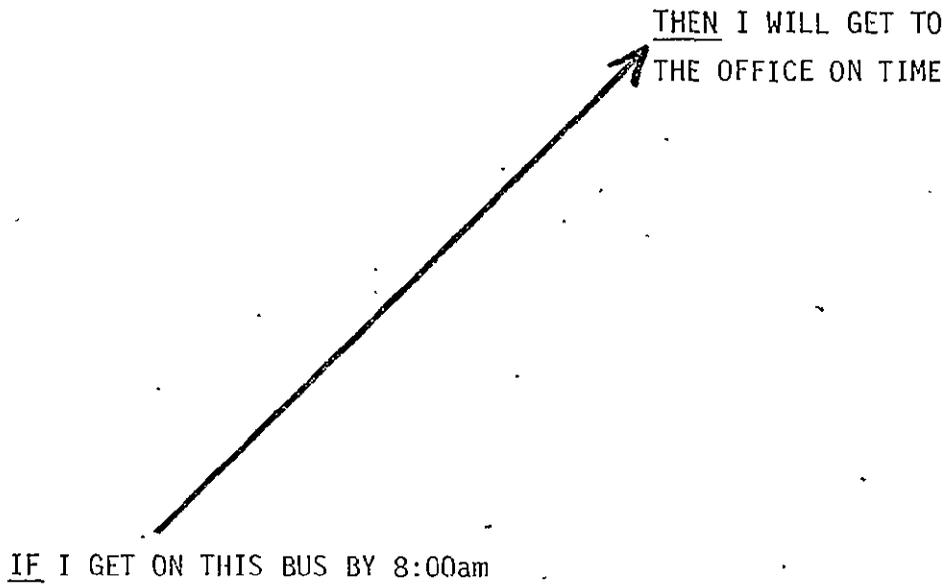
- GOAL: • THE HIGHER ORDER OBJECTIVE FOR WHICH THE PROJECT IS ONE LOGICAL PRECONDITION
- PURPOSE: • WHAT WE HOPE TO ACHIEVE -- THE "REAL" OR ESSENTIAL MOTIVATION FOR PRODUCING OUTPUTS
- OUTPUTS: • THE SPECIFIC RESULTS PRODUCED BY MANAGEMENT OF INPUTS
- INPUTS: • THE ACTIVITIES TO BE UNDERTAKEN AND THE RESOURCES AVAILABLE TO PRODUCE THE OUTPUTS

THE LOGIC OF A PROJECT:
A SET OF LINKED HYPOTHESES



WHAT IS A HYPOTHESIS?

- A PREDICTIVE STATEMENT ABOUT A CAUSAL RELATIONSHIP BETWEEN TWO ELEMENTS INVOLVING UNCERTAINTY



UNCERTAINTY: "ASSUMPTIONS" ABOUT

- CONDITION OF THE BUS
- TRAFFIC DELAYS

~~_____~~

GOAL:

ELIMINATE ILLNESSES CAUSED BY DRINKING IMPURE WATER

PURPOSE:

RURAL POPULATION ADOPT HYGIENIC PRACTICES

OUTPUTS:

- 1. CLEAN WATER PROVIDED TO 60% OF VILLAGES IN N.W. REGION
- 2. HEALTH WORKERS TRAINED TO TEACH VILLAGERS

INPUTS:

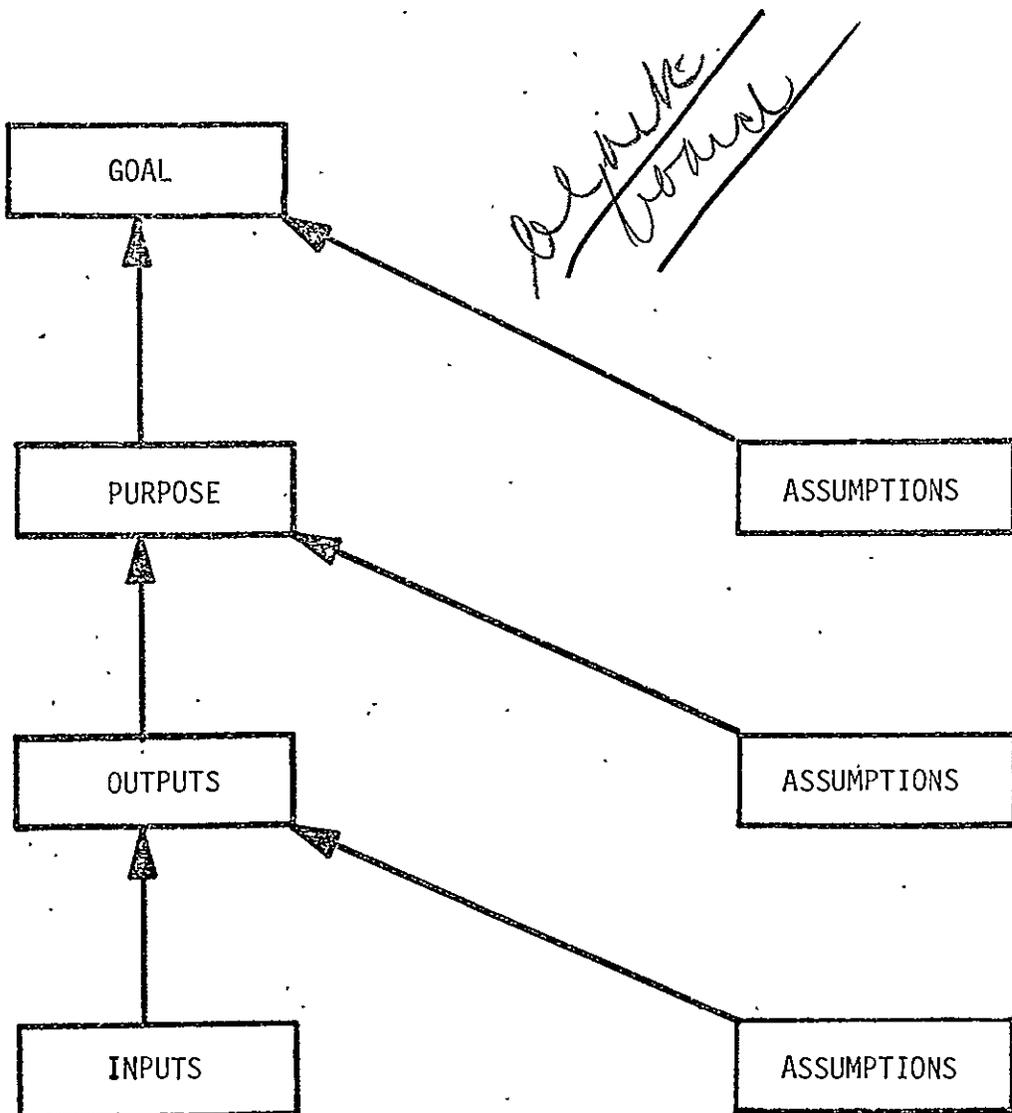
- 1a. CHOOSE THE SITES
- b. ORGANIZE VILLAGE WORKERS
- c. DIG WELLS
- 2a. DEVELOP CURRICULUM
- b. RECRUIT HEALTH WORKERS
- c. CONDUCT TRAINING

#15
"

MAKING THE PROJECT'S LINKED HYPOTHESES EXPLICIT

IMPROVES THE PROJECT DESIGN

Exercise



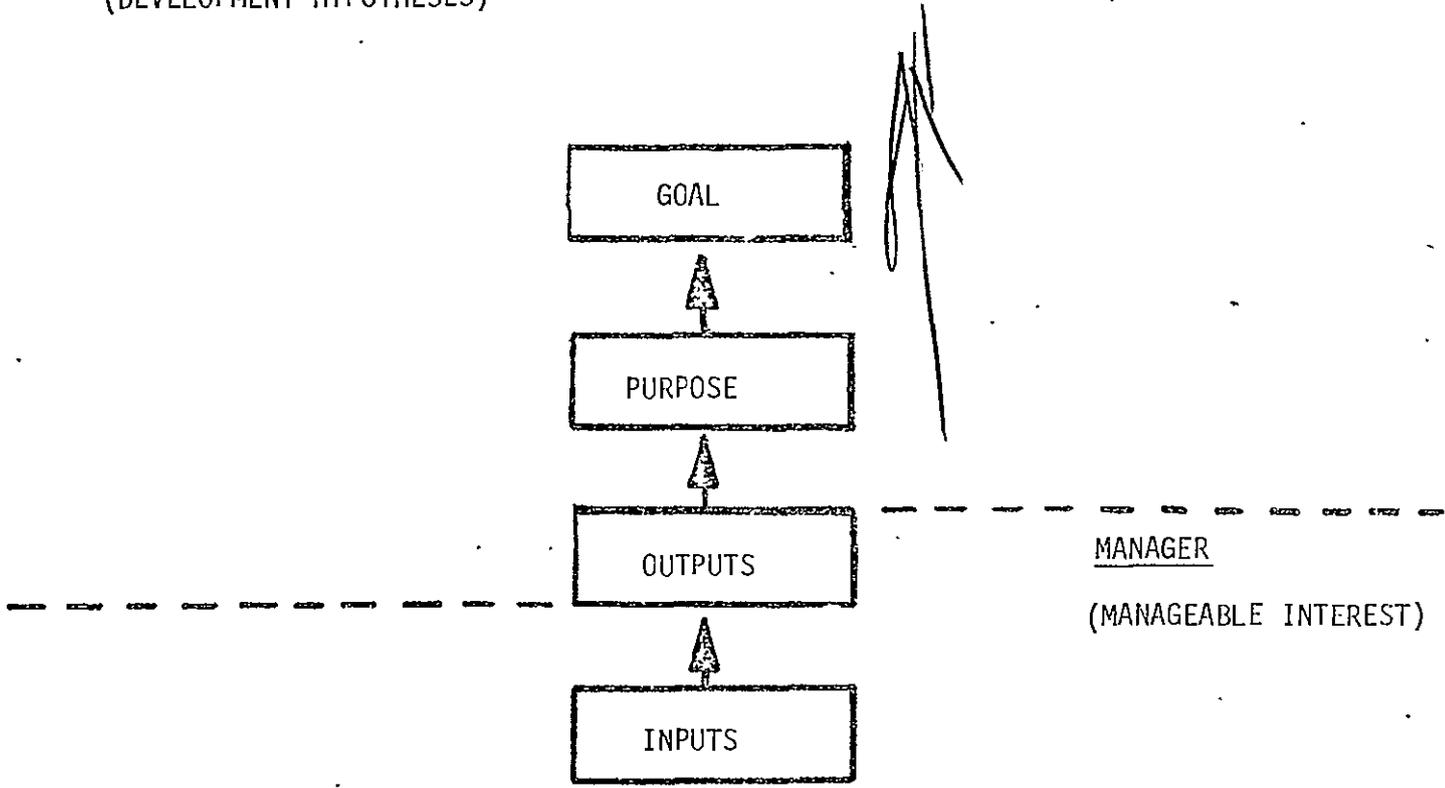
ASSUMPTIONS ABOUT EXTERNAL FACTORS MUST ALSO BE MADE EXPLICIT

		<u>ASSUMPTIONS</u>
GOAL:	FARM INCOME ABOVE POVERTY LEVEL	
PURPOSE:	PRODUCTIVITY/ACRE AT M-KILOS/HECTORE	<u>PURPOSE TO GOAL:</u> ◦ PRICES STABLE ◦ TRANSPORT AND STORAGE FACILITIES ADEQUATE ◦ MARKET DEMAND
OUTPUTS:	FERTILIZERS USED	<u>OUTPUT TO PURPOSE:</u> ◦ FERTILIZER USED WHERE NEEDED ◦ RAINFALL/IRRIGATION SUPPLY ADEQUATE ◦ ETC.
INPUTS:	<ul style="list-style-type: none"> ◦ DEVELOP DISTRIBUTION SYSTEM ◦ TRAIN FARMERS ◦ DISTRIBUTE FERTILIZER ◦ DEVELOP CREDIT MECHANISMS 	<u>INPUTS TO OUTPUTS</u> ◦ FARMERS RECEPTIVE TO NEW METHODS ◦ FERTILIZER PRICES REMAIN STABLE

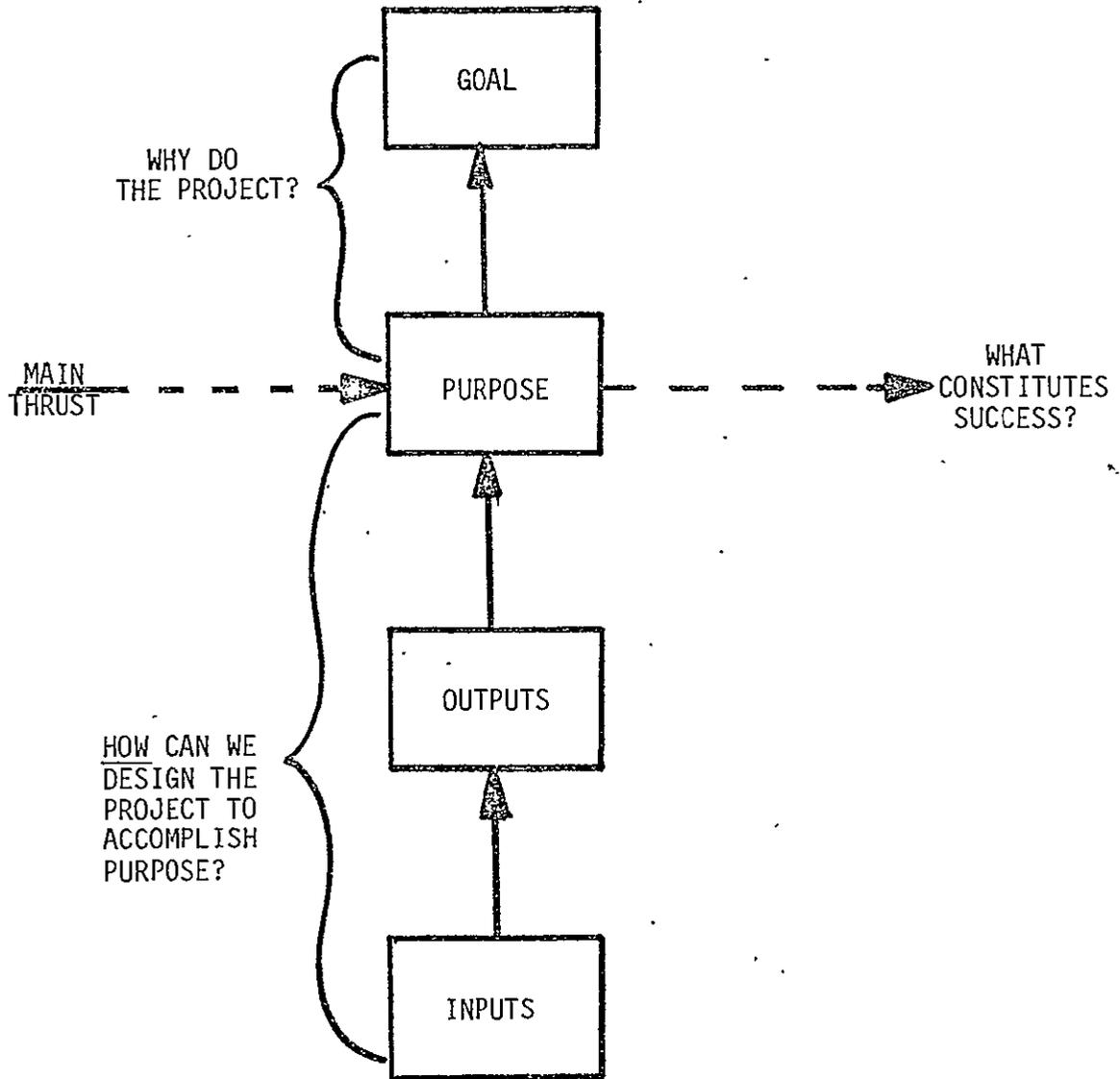
AT EACH LEVEL OF THE PROJECT, THE NECESSARY & SUFFICIENT CONDITIONS FOR ACHIEVEMENT OF THE NEXT LEVEL OBJECTIVE ARE IDENTIFIED

SCIENTIST

(DEVELOPMENT HYPOTHESES)

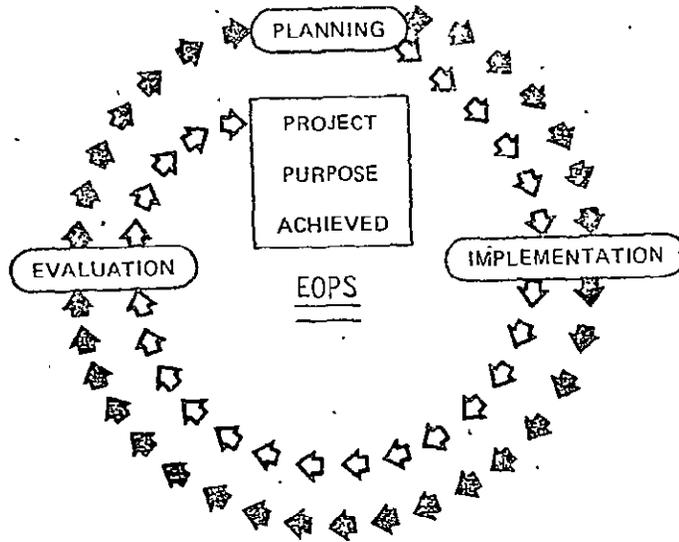


TWO PERSPECTIVES ON THE PROJECT DESIGN



THE LOGICAL FRAMEWORK FORGES US TO CLARIFY PROJECT INTENT:
 END OF PROJECT STATUS (EOPS)

"HOW WILL YOU KNOW WHEN THE PROJECT
 HAS BEEN SUCCESSFULLY COMPLETED?"



END-OF-PROJECT-STATUS (EOPS)

- THE SET OF CONDITIONS THAT SIGNAL SUCCESSFUL ACHIEVEMENT OF PROJECT PURPOSE
- PROPONENT & SKEPTIC CAN AGREE ON PROJECT STATUS

PURPOSE	EOPS
EMERGENCY MEDICAL CARE FACILITIES EFFICIENTLY MANAGED	<ul style="list-style-type: none"> ◦ EMERGENCY WARD OPERATES 24 HOURS/DAY BY 1978 ◦ AMBULANCE UNIT RESPONDS TO ALL CALLS WITHIN 30 MIN. BY 12/78 ◦ FULL RANGE OF MEDICAL SKILLS AVAILABLE ON 15 MIN. NOTICE BY 12/78 ◦ POST TRAUMA MORTALITY RATES REDUCED BY 15% BY 12/78

OBJECTIVELY
VERIFIABLE
INDICATORS

PURPOSE:
Malnutrition
Eliminated among Elementary
school children

END OF PROJECT
STATUS

Village elementary
school children
are of normal
weight/height
by 1977

THEN

OUTPUTS:
Food distributed
to those who
need it

OUTPUT INDICATORS

300 tons of milk dis-
tributed per month in
village elementary
schools

/ IF

Accepting the view of a project as a series of "linked hypotheses,"
it is logically fallacious to measure outputs to prove purpose.
(You cannot prove the "Then" by demonstrating the "If".)

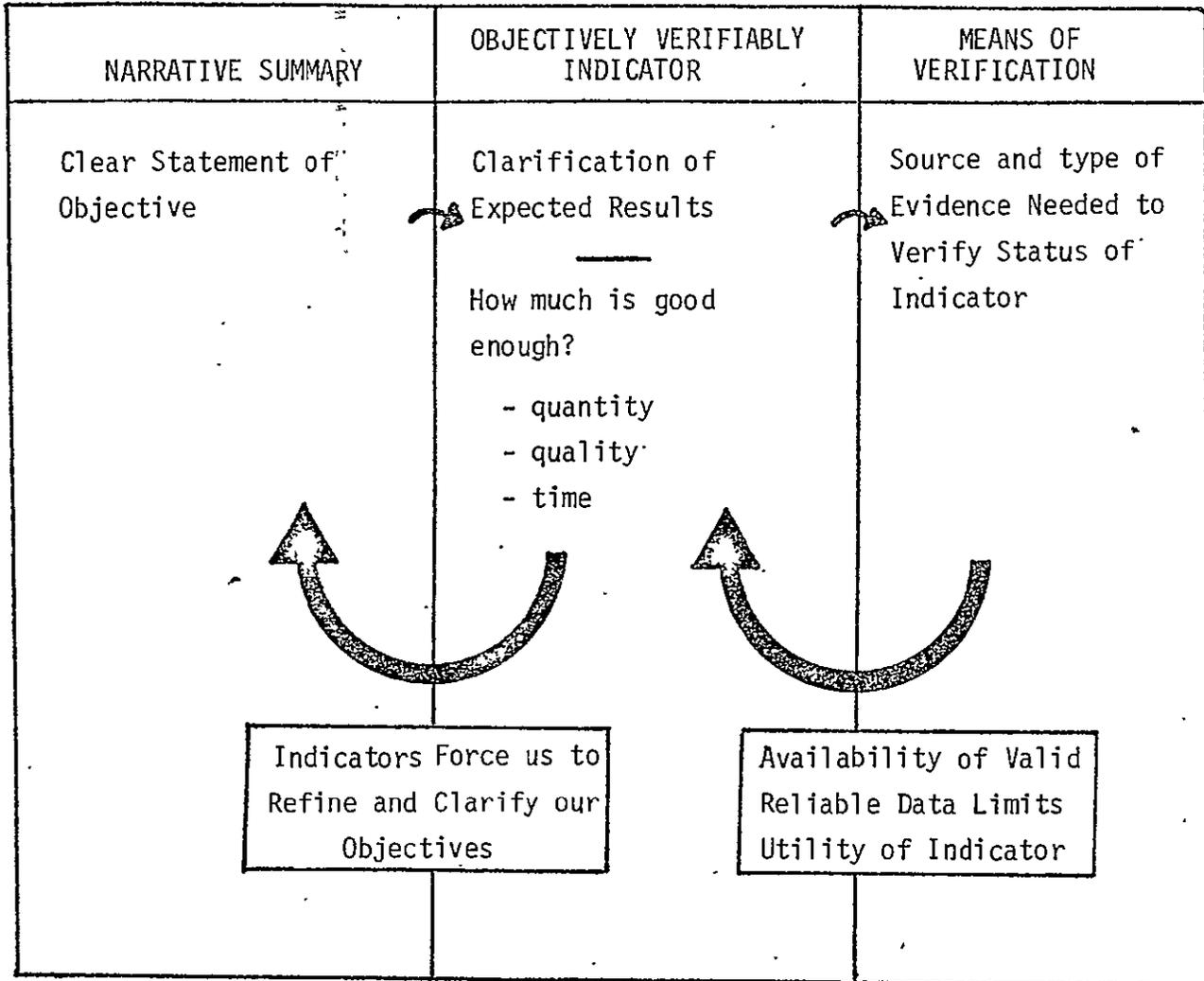
OBJECTIVELY VERIFIABLE INDICATORS (OVIs)

- IDENTIFY THE EVIDENCE THAT WILL DEMONSTRATE ACHIEVEMENT AT EACH LEVEL:
 - THE SET OF OVIs AT THE PURPOSE LEVEL ARE CALLED EOPS
- ACHIEVEMENT CAN BE OBJECTIVELY VERIFIED: PROONENT AND SKEPTIC WOULD AGREE TO WHAT EVIDENCE IMPLIES
- MEASURE WHAT IS IMPORTANT
- MUST BE TARGETED:
 - HOW MUCH?
 - HOW GOOD?
 - BY WHEN?
 QUANTATIVE AND QUALITATIVE & TIME INDICATORS
- PROCESS OF DEFINING INDICATORS FORCES US TO CLARIFY OUR OBJECTIVES

MEANS OF VERIFICATION (MOV)

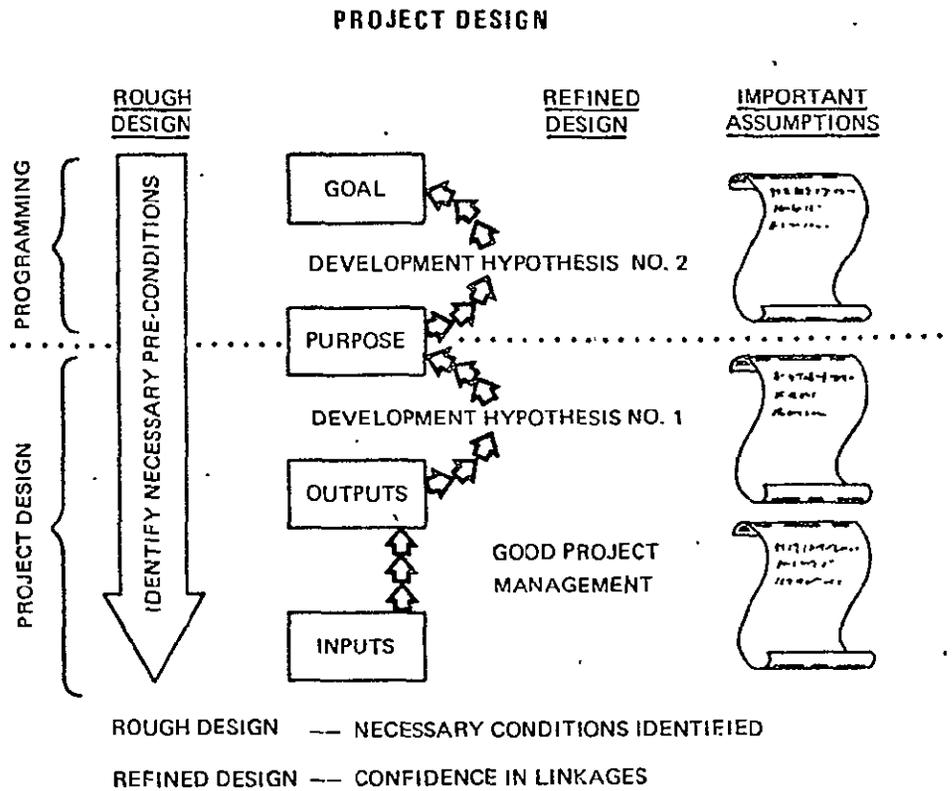
HOW DO WE GET THE EVIDENCE?

- AVAILABLE FROM NORMAL SOURCES?
- SPECIAL DATA GATHERING REQUIRED?
 - WHO WILL PAY FOR IT? IMPLEMENT IT?
 - HOW MUCH DATA GATHERING IS WORTHWHILE?



HAVE WE SET FORTH APPROPRIATE & REALISTIC MEASURES OF PROJECT ACHIEVEMENT?

THE LOGICAL FRAMEWORK LEADS US TO REFINE THE PROJECT DESIGN AND IMPROVE IT



BASIC PROJECT DESIGN WITH ALTERNATIVE PURPOSES

GOAL: COLONIZE MALARIOUS REGIONS

PURPOSE: ERADICATE MALARIA
OR
CONTROL MALARIA?

OUTPUTS: 1. VIABLE ORGANIZATION IN PLACE
2. ALL VILLAGES SPRAYED AS SCHEDULED

INPUTS: 1a. TRAIN STAFF
b. BUILD OFFICES
c. DEVELOP OPERATIONAL PROCEDURES
2a. PROCURE VEHICLES
b. OBTAIN DDT
c. SCHEDULE SPRAYING

MODIFIED GOAL PRESENTS DIFFERENT ALTERNATIVES

GOAL: MAINTAIN GOVERNMENT PRESENCE IN REMOTE
AREAS

PURPOSE: "ERADICATE" MALARIA

OR

DELIVER FULL-RANGE HEALTH SERVICES
TO RURAL POPULATIONS

OR

CONTINUE W.H.O. MALARIA PROGRAM

OUTPUT: RURAL HEALTH TEAMS

SECTION TWO

OBJECTIVELY VERIFIABLE INDICATORS AND MEANS OF VERIFICATION

- A. LECTURE NOTES
 - B. CHARTS FOR PRESENTATION
-

A: LECTURE NOTES

TOPIC:

Introduction to Objectively Verifiable Indicators: Overview
(Chart 1)

DISCUSSION:

We have already introduced the concept of objectively verifiable indicators (OVIs), and worked with them in the first workshop. In this presentation we will develop the subject in more depth to increase your understanding of the use and value of OVIs.

LEARNING POINTS:

1. Indicators bring concreteness and specificity to project design-- they reduce abstractions by defining what will happen as a result of the project.
2. Using OVIs increases our confidence that we have defined the necessary and sufficient conditions at each level for achieving the next higher level.
3. The same indicators used for design become the basis for evaluation.
4. LogFrame is a neutral tool; it reflects our thinking; it cannot make decisions or judgments for us.

QUESTIONS TO ANTICIPATE:

What do you mean by horizontal logic?

What is an indicator?

TOPIC:

Clarification of Project Objectives (Chart 2)

DISCUSSION:

Now, let us look at how we can use indicators to clarify our objectives. We often come across a project where the goal is "improve living conditions" as in this example, or "improve quality of life" or "improve health." So in the dialogue between colleagues and those responsible for goals we have to ask WHAT DO YOU MEAN BY "improved.....?" [At this point it is usually useful for the instructor to ask the group to suggest what would be an indication that living conditions had indeed improved (or one of the other examples); after a few suggestions, it should be seen that there are widely differing opinions in the room, concerned with such things as type of housing--brick houses/wooden houses--with or without running water and toilets, electricity. They will be concerned with how many people live in the house and perhaps the safety and crime levels in the neighborhood.

This should illustrate that specification of indicators starts the clarification process of what is really expected to happen as a result of the project. We can state the objective more clearly; for example:

PURPOSE

Middle income population in _____ Village are living in adequate houses with modern facilities by 1980.

INDICATORS

1. 200 of the 250 middle income families live in wooden houses by 1980.
2. 100% of new houses meet specifications of the Changwat Governor (including metal roofs, water, and electricity.
3. 75% of the houses have operating connections with sanitation facilities systems and running water by 1980.
4. Trend indicates all houses will have hot and cold running water by 1985.

Thus from a vague statement of "improved living conditions" we have refined the purpose and come up with a sharply focused set of indicators showing what we expect by 1980. Having written clear indicators, it should be fairly straightforward to collect information on each of those indicators and thus evaluate the project.

LEARNING POINTS:

1. We must reduce vagueness and ambiguity to have a good project plan.
2. Focusing on results expected at end of project forces us to identify appropriate indicators.
3. Sources of indicators are often to be found in the problems affecting the target group which caused us to initiate the project [i.e., in this example, when asked why you need better housing, the justification will probably say something like--the poor people living in overcrowded, unheated houses, huts, or shelters; when the heavy monsoon winds and rains come, roofs leak and many shelters are blown away; there is no sanitation or running water in most of the homes, no electricity, etc.] The indicators of project success must be those indicators that show change in the important problems the target population is enduring.

TOPIC:

Example of OVis Showing Targets at Different Levels for Judging the Reasonableness of Linkages (Chart 3)

DISCUSSION:

Here we have an example where the objectives have been stated clearly; even so, when we add indicators, you can see greater clarification of exactly what the project intentions are.

Now it is clear from the example that, having defined they need 2000 tons per week delivered to the market, the project designers have decided that 200 miles of two-lane blacktop road will adequately support that level of movement of goods. But how did they define how much "purpose" was required? Obviously there is a goal implied in this example; let's assume it deals with farmer income. Thus the designers know how much income they want each farmer to receive; then they can decide how much produce the project must succeed in delivering to market in order for the desired level of income to be achieved. And how do we know what income levels are needed? This is a question which obviously will have to be answered according to the specific needs of the area--the environment of the farmers, and how much money they need to live above, say, the poverty level of their village. Targets should be derived from as high up the chain as possible, and then at each lower level it should be determined how much must be achieved in order to meet that higher level target. This will sometimes become an arbitrary process--and involve value judgments and guesswork as well as economics and wishful thinking; but it is useful to provide some boundaries on the project's objectives, and thus make it more realistic.

In addition, displaying specific targets at each level of the project allows the design team to make some cost-effectiveness assessments-- a preliminary step in cost/benefit analysis. Suppose in this example it will cost \$2 million to build the road; we can then see that the average cost per mile of road will be \$10,000; we can compare this with experience of building roads elsewhere and see whether or not we are being realistic; we can look at the purpose level and analyze how much it will cost to increase produce transported by 2000 tons delivered to market per week--i.e., \$2 million divided by (2000×52) equals approximately \$20 invested per ton per week. Again, we can make comparisons with costs elsewhere, our own experience, and consider the other costs for vehicles, maintenance, etc. and judge whether we believe this is a cost-effective project; the same analysis can be carried out at the goal level; if it costs more for the project than the expected increase in income, we should consider doing something else for increasing farmer income, or even giving him the money instead of using it for a wasteful project.

LEARNING POINTS:

1. Identification of indicators and setting targets on the indicators enables the designers to more accurately assess the realism of their project design.
2. It also allows a rough cost-effectiveness analysis at each level of the project.

TOPIC:

How much is good enough? (Chart 4)

DISCUSSION:

As we establish our indicators and targets the hardest question is "how much is enough?" The answer is always "enough for us to have confidence that the next level objective will be achieved."

Targets are derived from the targets of the next higher level. Until we set our indicators and targets, our project is still abstract and in its draft design stage. Indicators and targets bring the project to life and add meaning to the concept of necessary and sufficient conditions. The same discipline we use with objectives and indicators should also apply to assumptions. They are part of the necessary and sufficient conditions and should be stated equally specifically. If, in our produce example, we are assuming that others will be responsible for maintaining transport and marketing of fresh produce, we should identify what is required for our project to be successful; e.g., transport and marketing costs will not exceed \$20 per ton per mile and prices will be over \$250 per ton of produce.

LEARNING POINTS:

1. Target setting is difficult but valuable.
2. Targets must reflect the amount of accomplishment required at one level that we hypothesize will enable us to achieve the next higher level.

3. Assumptions should be treated with the same level of specificity since they are part of the necessary and sufficient conditions for project success.
4. Without targets and indicators, our projects remain abstract and difficult to fully understand, and foster misunderstanding between the parties to the project.

TOPIC:

Example of Identification at One Level of Necessary and Sufficient Conditions for Obtaining the Next Superior Level (Chart 5)

DISCUSSION:

Here we have a malaria eradication project where the necessary and sufficient conditions for achieving the purpose have been clearly spelled out at the output level.

[Talk through example, relating levels of effort at output level to achieving the purpose--including comment on the assumption.]

LEARNING POINT:

1. Demonstrate concept of necessary and sufficient conditions at each level for achieving next higher level.
2. Introduce dimensions of good targets--quantity, quality, and time.

TOPIC:

When to Use Single or Multiple Indicators (Chart 6)

DISCUSSION:

The question frequently comes up in design efforts "how many indicators should we use?" The answer is simply "as few as possible to measure what is important about the project."

Data gathering and analysis can be expensive; if you collect data on everything that is interesting as well as necessary, you may never get through the analysis; you will be swamped with too much data. The amount of raw data sitting unanalyzed and uncatalogued on government shelves is frightening; it was collected without clear reasons, because of a feeling that we must find out everything that is going on in case we miss something, and of course, we may then miss something because we have too much information!

Let's look at a project with a straightforward objective; imagine this is a project for developing an olympic champion runner. One indicator may be sufficient:

The second example is more complex and you will need several indicators to capture the important aspects of the purpose. The indicators in this example are illustrative of what might be considered important. They would of course need to be targetted before they could be considered "good" indicators.

LEARNING POINTS:

1. We have limited resources, therefore,
2. We should use as few indicators as possible while gaining confidence that we have measured the most important elements of the project; the indicators together should be sufficient to remove ambiguity about what we intend to achieve.
3. The number of indicators is directly related to the complexity and importance of what we are trying to measure, not some arbitrary number.

TOPIC:

Attributes of Good Indicators (Chart 8)

DISCUSSION:

Good indicators have four attributes. This is merely a summary of what will be discussed in detail; the attributes should merely be listed, and then move on.

LEARNING POINTS:

1. For indicators to be valid and useful, they must be plausible, independent, objectively verifiable, and targeted.

TOPIC:

Indicators Must Be Plausible (Chart 9)

DISCUSSION:

When we say that indicators must be plausible we basically mean two things: First, they should measure what is important in the narrative statement; we sometimes fall into the trap of measuring what is easy to measure rather than what is important. Sometimes what is important is also easy to measure, but we must focus on importance first, then measurement. It helps to select indicators in the first instance without thinking about the issue of measurement at all. If we think about problems of measuring at the same time as we are trying to select indicators, a subconscious censorship tends to occur, whereby a good indicator is immediately thrown out because we think it cannot be measured. Select the good indicator, and then spend some effort, time and energy--perhaps even calling in experts as necessary--on finding practical approaches to measurement.

Example: The first indicator is not relevant; "pleasant to see" is desirable in a building but not relevant to the issue of safety. However, when we find ourselves putting in an indicator that appears irrelevant at first, we should always ask ourselves if it is really irrelevant, or if in fact we want more than our original narrative states--i.e., do we really want a safe, attractive building?

Second, the indicator, to the extent possible, should vary because of the project. The usefulness of an indicator diminishes if there could be several other reasons for a change in the indicator.

Example: In the example, increases in tax revenue may occur without better administration of the tax bureau; people might be earning more so that the tax bureau collects money despite its inefficiency. We must try to use indicators that directly measure improved administration.

One approach to developing good indicators is to ask "why do we feel the tax bureau needs improvement?" What are the problems that prevent it from operating adequately? Some answers might be "well, last year it was taking six months to process the returns," "the error rate was at about 45% of all returns," "checks sent in were being lost," "money collected was also being lost, etc." Some indicators can simply be a solution of the problems; i.e., "By 1980:

1. Returns processed in four weeks from date of receipt.
2. Error rate of processed returns reduced to 10% of all returns.
3. Money collected corresponds to money handed over to the treasury.
4. Number of complaints received of unfair or irregular practices reduced to only 5% of all tax collector encounter."

LEARNING POINTS:

1. Indicators must measure what is important, not just what is easy to measure;
2. Indicators must correlate closely with what they are measuring so that it is plausible that the presence of the indicator demonstrates achievement of our objective.

REFERENCE:

AID Use of Development Indicators: A Progress Report, AID, Program Methods and Evaluation Office, Washington, D. C. March 2, 1974.

TOPIC:

Indicators Must Be Independent (Chart 10)

DISCUSSION:

The question of independence of indicators at different levels causes many problems. It is a simple concept, and with simple teaching examples causes no problems; however, when we get back to the real work and are faced with a complex project, say an integrated rural development project, then the issue becomes confusing again. It may be difficult to develop indicators for a complex objective like the purpose of building a "great university;" if you ask your colleagues in such a project how they will know when they have a great university, they might tell you "it has marvelous buildings, great science laboratory facilities, and highly competent professors." A great university may need these things to make it great (outputs), but their mere existence doesn't prove it is great. We want to look at things such as its reputation among its peers and its students. How well do students learn? Do they do well in the jobs because of the training they received at that university? Does it have students eager to enroll because of its great reputation? What are the signs of its greatness? The problem is partly in differing value judgments about what is really important in a university. The value judgment differences are revealed in a Logical Framework analysis.

Example: In the fishing example, the error of choosing indicators that are not independent should not occur. An increased fish catch is measurable by tons of fish caught; many projects are of this type. You can see that training the fishermen should not be

used as an indicator of increasing the fish catch. The problem is more difficult in measuring institutional success or with a purpose like "create a capability within the government to do" The trap is in the word "capability" and trying to measure it separately from observable performance. This problem most often arises at the purpose level. The most important question you can ask in trying to determine whether the indicators you have selected are independent of the next lower level is to ask "Are these purpose level indicators the things needed to create the purpose (and therefore outputs) or are they signs the purpose has been achieved?"

LEARNING POINTS:

1. Indicators measure the change we are trying to make happen, they are not the things required to make that change.

EXAMPLES:

Bad Practice

Purpose

To modernize financial administration in the Ministry of Finance.

EOPS

1. Coordinated Government-wide accounting system in place.
2. Improved budget organization structure developed.
3. Effective post-audit system in place.
4. Modern money management procedures manual printed and circulated to key employees.

[i.e., All of these are necessary for the purpose, and are therefore OUTPUTS, not EOPS.]

TOPIC:

Indicators Must Be Independent (Chart 10)

DISCUSSION:

The question of independence of indicators at different levels causes many problems. It is a simple concept, and with simple teaching examples causes no problems; however, when we get back to the real work and are faced with a complex project, say an integrated rural development project, then the issue becomes confusing again. It may be difficult to develop indicators for a complex objective like the purpose of building a "great university;" if you ask your colleagues in such a project how they will know when they have a great university, they might tell you "it has marvelous buildings, great science laboratory facilities, and highly competent professors." A great university may need these things to make it great (outputs), but their mere existence doesn't prove it is great. We want to look at things such as its reputation among its peers and its students. How well do students learn? Do they do well in the jobs because of the training they received at that university? Does it have students eager to enroll because of its great reputation? What are the signs of its greatness? The problem is partly in differing value judgments about what is really important in a university. The value judgment differences are revealed in a Logical Framework analysis.

Example: In the fishing example, the error of choosing indicators that are not independent should not occur. An increased fish catch is measurable by tons of fish caught; many projects are of this type. You can see that training the fishermen should not be

used as an indicator of increasing the fish catch. The problem is more difficult in measuring institutional success or with a purpose like "create a capability within the government to do" The trap is in the word "capability" and trying to measure it separately from observable performance. This problem most often arises at the purpose level. The most important question you can ask in trying to determine whether the indicators you have selected are independent of the next lower level is to ask "Are these purpose level indicators the things needed to create the purpose (and therefore outputs) or are they signs the purpose has been achieved?"

LEARNING POINTS:

1. Indicators measure the change we are trying to make happen, they are not the things required to make that change.

EXAMPLES:

Bad Practice

Purpose

To modernize financial administration in the Ministry of Finance.

EOPS

1. Coordinated Government-wide accounting system in place.
2. Improved budget organization structure developed.
3. Effective post-audit system in place.
4. Modern money management procedures manual printed and circulated to key employees.

[i.e., All of these are necessary for the purpose, and are therefore OUTPUTS, not EOPS.]

Better Practice

Purpose

Major government institutions practice financial administration.

Consistent with state-of-the art.

EOPS

1. 30% reduction in cost overruns by 6 major government departments-- Education, Health, Agriculture, Public Works, Welfare, Commerce-- in 1978 compared to 1975.
2. Government departments submit clearly stated budget requests on time.
3. Government reports show 95% accuracy in independent audits.

TOPIC:

Indicators Must Be Objectively Verifiable (Chart 11)

DISCUSSION:

The question of whether or not an indicator is objectively verifiable frequently comes up, especially with more complex projects trying to effect behavioral change.

What we are trying to do is focus attention on "evidence"--hard objective data that we can analyze. Project proponents and skeptics should agree on what has, or has not, happened in a project; did they graduate 60 students or not? Did 600 farmers use the new agricultural methods (traction ploughing, planting new seed, etc.) or not?

Suppose someone says they are trying to build up "a herd of good-looking cows?" A herd is not as well defined as, say, a baseball team; a herd could mean 10 cows or 1,000 cows. And what does "good-looking" mean? So if we state the indicator in the terms on the right as "400 black angus", then it leaves no room for argument and we can collect data on whether or not it was achieved.

An indicator that deals with attitudes toward an institution is harder to quantify objectively. One way to do this is to ask ourselves to what target group does the reputation of the institution matter? Suppose the project is a rural hospital--we would want an indicator of the quality of its services from the point of view of its patients. We might develop indicators that say 40% of the families in a specified area use the hospital in a year, and 80% of the patients say they are satisfied with the services and have recommended or would recommend it to their friends. Note that their attitudes do not mean the services are really good or bad; attitudes are notoriously hard to measure and predict.

LEARNING POINTS:

1. Indicators should focus attention on facts, not opinions.
2. Be wary of indicators that deal with "wants," "wishes," or "attitudes"--where possible indicators of behavior should be used. The evidence demonstrating behavior tends to be more factual than the measures for demonstrating attitudes.

TOPIC:

Indicators Must Be Targetted (Chart 12)

DISCUSSION:

To be objectively verifiable, indicators must be "targetted." The three characteristics of a good target are:

How much? (Quantity)

How well? (Quality)

By when? (Time)

Quality is the least obvious and most frequently forgotten of these targets. If the target is "to raise wheat production by 3000 tons to 35,000 tons by 1980," what happens if we ignore the question of quality, or did not make it explicit? Implicitly the quality assumed is wheat that consumers will accept as equivalent to present production. Inferior quality will result in lower prices or unsold production and perhaps poorer nutrition to consumers.

A target is necessary for evaluation. It is inadequate to state the result as production of wheat; no one can verify if it happened or not without a target of quantity, quality, and time. Percentage changes require a base line (e.g., 30% increase from 150 tons in 1975).

LEARNING POINTS:

1. Three dimensions to targets: Quantity, Quality, and Time.

2. Quality is frequently the most difficult, but also the most rewarding in terms of gaining better insight into a project and our objectives.
3. In setting targets we must always keep the question in mind: "How much is good enough for achieving the next level objective?"
4. Rigorous application of the targetting principle to indicators makes the evaluator's job that much easier. Planned versus actual achievement can be compared, then objective statements made about project progress based on evidence.

EXAMPLES:

There was a project in a developing country to raise corn production, using the new High Yield Variety (HYV) seed. Production targets and a time frame were set. The quality dimension was assumed; or was related to growing ability of the corn and its ability to grow more kernels of the right size and shape.

The project did very well the first year, and reasonably well the second year, but the third year most of the farmers stopped buying the new seed and went back to the old variety they were using before, even though the yields were much lower. The fourth year hardly any farmers were buying the new seed. The farmers' wives were refusing to buy the new corn; They had found that it just didn't cook right. When they made tacos (flat circles of cornmeal which are folded in two and filled with meat or vegetables), the cooked tacos wouldn't stay firm and in the correct folded position. In addition, the farmers themselves were grumbling that the tacos made of the new corn just didn't taste as good as the old ones. Thus an important dimension of quality was that the new corn should taste right and be as effective in cooking tacos as the old corn.

TOPIC:

Selecting Indicators in Special Situations (Chart 13)

DISCUSSION:

We have been talking about selecting indicators in terms of measuring success at the end of the project for the purpose of EOPS, and on the outputs, whenever you expect the output to be completed, since some outputs will be completed long before the end of the project.

Now, what do you do when (a) you are interested in performance after the end of the project, or (b) the method of collecting the data to verify the indicator is likely to influence the evidence you collect?

"Leading indicators are widely used in economics for economic forecasting. Investment in factories is a leading indicator of production. "Leading indicators" are useful for predicting trends. Seek an indicator that is sufficiently connected with what we wish to measure that we can make reasonable predictions. For example, airline reservations may be used to predict volume of air travel. There is experience about the percentage of people who make reservations, that actually make the trip on that flight or another flight:

When the data collection effort itself interferes with the project or might bias the evidence, we search for another substitute or proxy indicator which closely correlates with the ideal indicator but which is not affected by the method of obtaining data.

LEARNING POINTS:

1. It is sometimes necessary to select "leading indicators" to predict events that will happen after the end of the project. These must be handled with care as they are an imperfect substitute for the indicator of interest, adding uncertainty for managers using the data.
2. It is important to assess whether efforts to collect data will bias the indicator or hamper the project. Where this is a serious risk, a "proxy" indicator which correlates closely with the ideal indicator should be selected. This is also true where it is not feasible to collect the ideal information because of cost and time constraints.

EXAMPLES:

1. A museum director wanted to know which of the many exhibits in his museum was the most popular, so that he could plan a remodeling program for the museum. Conventional methods of observing and counting would cost thousand of dollars. He was sitting at his desk one day, reviewing a proposal to do the research and sighing over the cost. On his desk there happened to be a request for a few hundred dollars' worth of new carpeting to replace areas in the museum that had become worn over time. He recalled that he had approved such a request only a short time before. After some checking, he discovered that the carpets were being replaced fairly often before only a few exhibits. "Eureka!" he cried, "obviously those are the most popular exhibits." So he had his answer and was able to file and forget that expensive study proposal. (This example often gets protests that maybe the carpets

were on the way to the rest rooms, etc., which is a good point; this kind of data--what we call unobtrusive measures*--should be handled with care. The data collection does not bias the evidence, but there may be other causes of that evidence, and it must be interpreted with care.)

2. "Income" is difficult to measure directly in many cases. However, there often are unobtrusive measures of improved income status around. In one country, visiting a small mountain village, PCI evaluators noticed the variety of roofs to the houses: thatched with banana leaves, thatched with a different thicker leaf, plain wood, more fancy wood, and roofs of tin and corrugated iron. We learned that tin roofs represented the highest status and highest income groups, the wood roofs were next in terms of status and income, and the roofs thatched with banana leaves were on houses owned by the poorer people in the village. The group leader thought changes in the number of houses with improved roofing could be a useful proxy indicator for this region for increased income. He suggested also using the number and type of cooking pots a family uses. There are many unobtrusive measures that we can use for indicators if we search for them. We must be particularly careful about interpreting the results since the "indirect" or "proxy indicator" introduces an added source of error in any interpretation.

* Unobtrusive Measures -- measures which can be obtained without directly asking a person questions (which may bias the response).

TOPIC:

Baseline Data (Chart 14)

DISCUSSION:

Baseline data is important and is implicit in most indicators. Indicators are used to describe the level of achievement expected due to the project. But to judge significance, we must ask "level of achievement compared to what?"

In many cases the problem is statement provides baseline data in general terms. A country has a high illiteracy rate, many children are under nourished, the proportion of the population at the poverty levels is known approximately. Usually there is uncertainty for the data which is most needed to measure baselines and project impact. In considering baseline data and figures, we must ask:

1. How accurate are the figures?
2. What are the baseline figures for the particular target community, region, or village?

So for the indicators chosen to reflect success of our project, there should be a baseline. Baseline can help set realistic targets. A problem may not be completely solved with the resources available for the project as planned, or if a baseline survey showed that only 20% of the villagers were below the poverty line, we might chose another village for the project, reduce the project scope, or forget about it altogether and try something totally different.

LEARNING POINTS:

1. For indicators to measure expected change, there must be a measure of the starting point and ending point.
2. Baseline data must be collected carefully as it is just as vulnerable to bias as later collections of data.

TOPIC:

Summary (No Chart)

DISCUSSION:

So, in summary, there are three important things to remember about objectively verifiable indicators.

1. They should plausibly measure the important "effect" you are after and not restate the "cause."
2. They should always be targetted in terms of quantity, quality, and time.
3. Their usefulness is limited to the extent that adequate, reliable data can be collected.

In addition, I should just remind you that again, the process of developing indicators is entirely neutral and technical. Select indicators that reflect the most important aspects of your project, whether it is a straightforward production project or if it includes political and other objectives. Indicators are project unique, but the process applies to all projects and programs.

TOPIC:

Means of Verification (MOVs) (Chart 15)

DISCUSSION:

Considering "Means of Verification" at the project design phase forces realism about what information can really be used in project management and evaluation. Does data exist? Is it accurate? How much will it cost to get it? Dealing with these questions during the design phase can save money and effort and ensure that sufficient data is collected to evaluate the project. Waiting until the end can be very costly, or make it impossible to collect necessary data. In either case, we may need to refine the indicators, selecting a practical "proxy indicator" instead of the "theoretically ideal" indicator that will be too costly for this specific project.

LEARNING POINTS:

1. Data may be available (a) easily from existing sources, (b) easily if we plan ahead to collect it as the project progresses, or (c) available only with a costly special effort.
2. We should always be concerned with the accuracy and validity of the data.
3. Identification of Means of Verification should be included in the project design phase.

TOPIC:

Example of Means of Verification (Chart 16)

DISCUSSION:

Even simple looking indicators may turn out to be too complex when you explore what is necessary to get the data. When you first glance at the purpose and EOPS indicator in the example, it looks fairly easy to find means of verification: sales records from the land office. But it is not enough that the houses are sold; they must be sold to former tenement residents, who are low-income families. This information will not be available from the land office. You may have to seek information from the tax office, or even survey the purchasers of the new houses. Tax records are usually confidential. Surveys are costly and open to misinterpretation and bias. One approach is a careful sample survey to cut costs. Or it may be prudent to revise the indicator if these problems seem too great.

LEARNING POINTS:

1. Be realistic about what information you can get.
2. Ask if the data source will produce reliable data.
3. Be realistic about the cost for special data collection. You can cut costs by focusing attention on the items that are essential for good management and omitting the "nice to know" items.

QUESTIONS TO ANTICIPATE:

Q: Should you start a project if you have no way of knowing whether or not it succeeded or failed?

A: Each case must be looked at in its own context; however, I would call your attention to the amount of vital resources--in terms of development resources--that have been wasted because we could not tell whether or not we were succeeding or failing. I am sure you have heard of all kinds of horror stories where money continued to pour into a project in the hopes of achieving something from it.

TOPIC:

Means of Verification and the Logical Framework (Chart 17).

DISCUSSION:

Clearly thinking about means of verification may lead to changes in the project design. Typically, you will identify information that is (a) essential for good management and (b) not available unless it is added to the project. In this case, the appropriate means of verification was a special survey of households. The project design team decided to build it into the project and obtain funds for it at the beginning, rather than risk not having funds at the time when the evaluation was needed. In this situation, add new activities to the input narrative and the corresponding costs to the budget. The completed survey is an additional output and should have indicators of quantity, quality and time.

LEARNING POINTS:

1. Special data collection efforts have implications for project costs and project activities.

TOPIC:

No Data. Too Expensive Data. (Chart 18)

DISCUSSION:

When data is unavailable or too costly to obtain, what can you do? You can try to change the indicator--develop a proxy indicator which closely correlates with the desired indicator. You may decide the indicator is not essential for good management and drop it rather than deceive yourself about what data will be available. The project itself should be re-examined and hard questions asked about its value.

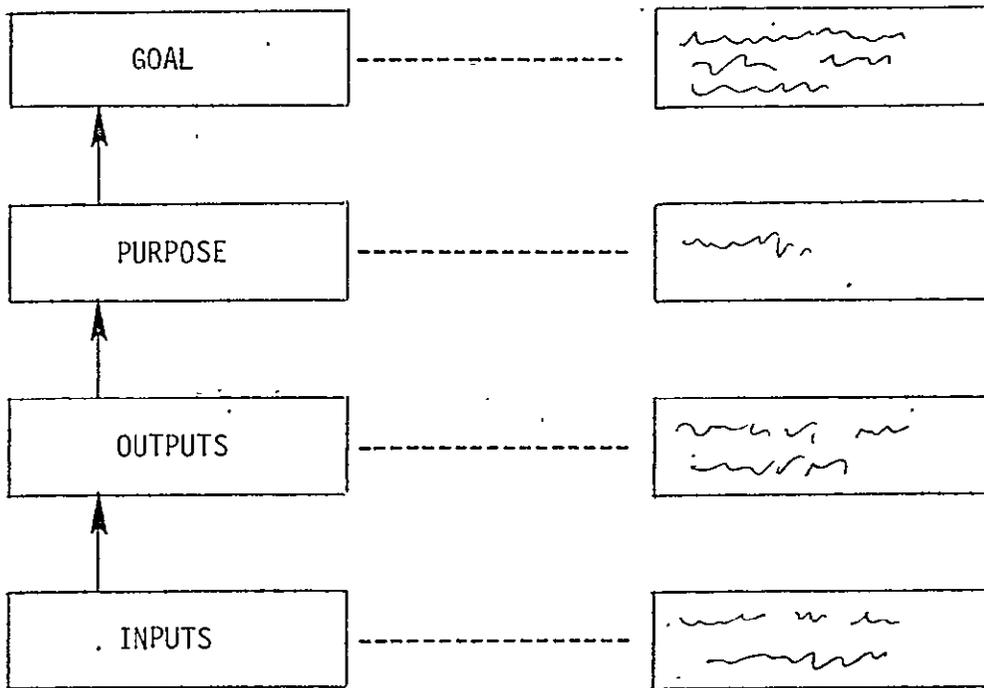
LEARNING POINTS:

1. If data is lacking or too costly, try to find "proxy" indicators to replace the desired indicator.
2. Ask if you really need that indicator to measure the desired effect.
3. Make judgment to go ahead with project only after weighing the implications of lack of specific data.
4. Information has a value and a cost. Both should be considered in planning a project and deciding what is needed for good management.

B. OVis AND MOVs CHARTS FOR PRESENTATION

"OBJECTIVELY VERIFIABLE INDICATORS"

(OVIs)

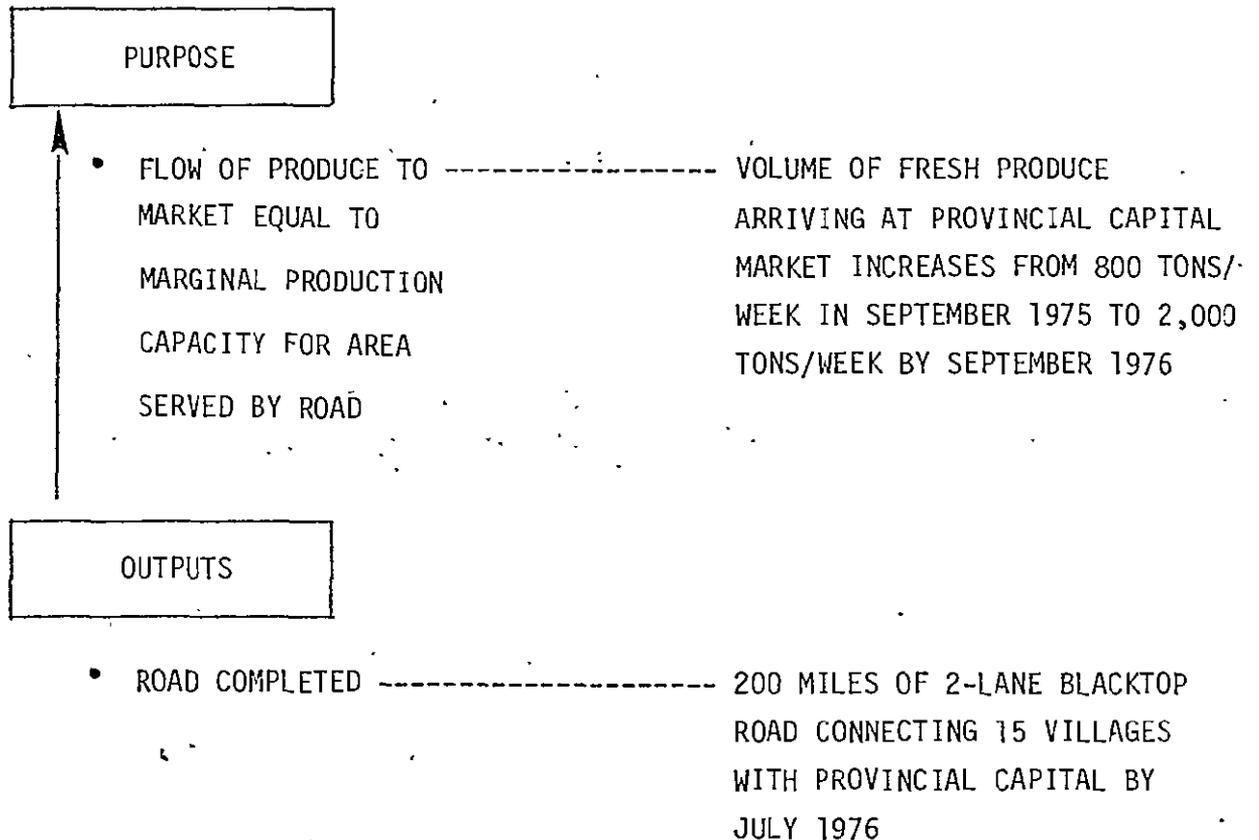


- LINKED HYPOTHESES DEFINE THE PROJECT INTENTIONS
- INDICATORS SPECIFY THE EVIDENCE THAT WILL SIGNAL SUCCESS

THE PROCESS OF DEFINING INDICATORS
FORCES CLARIFICATION OF THE PROJECT
OBJECTIVES

- WHAT DO YOU MEAN? --- "IMPROVED LIVING CONDITIONS"
- WHERE DO YOU FIND INDICATORS?

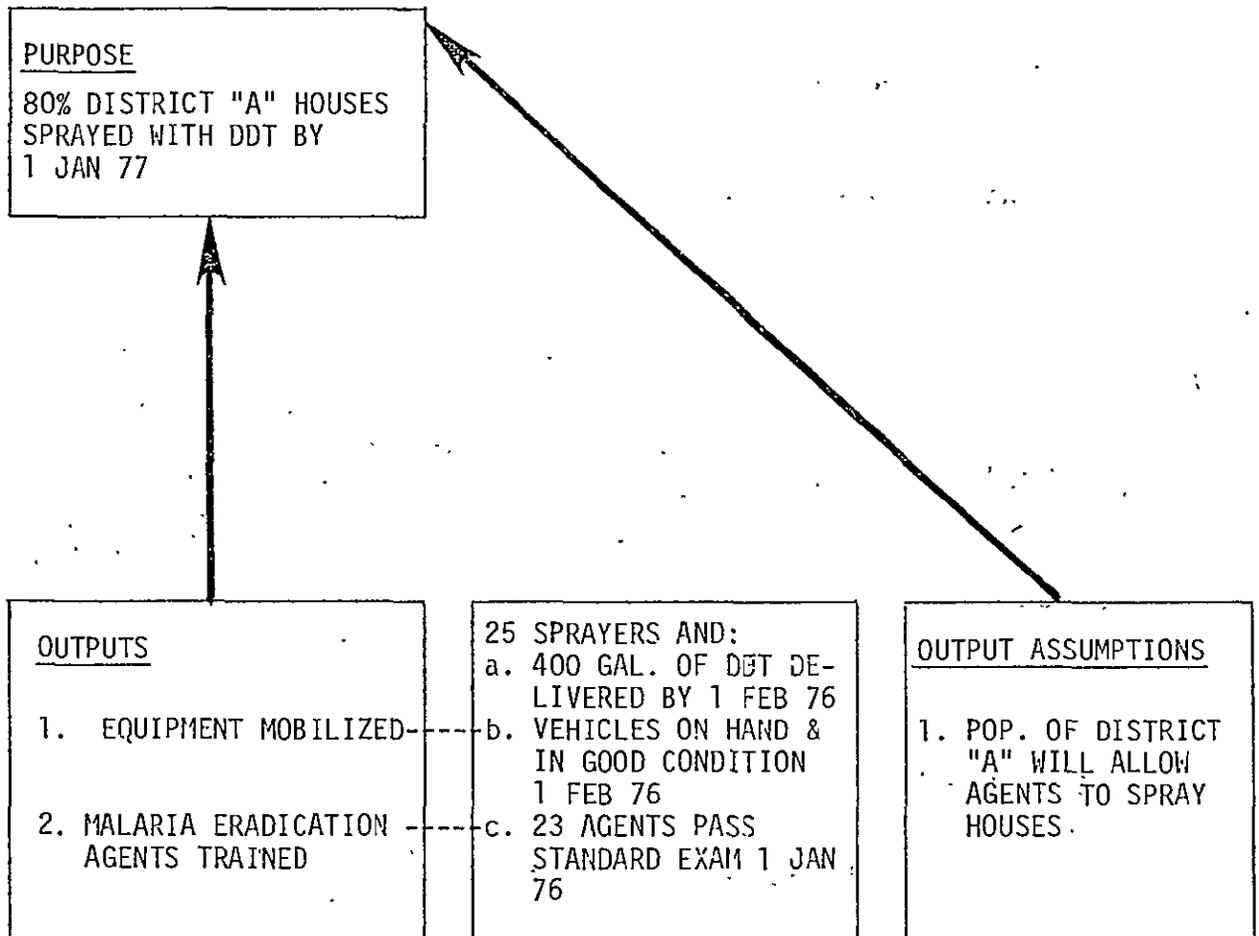
OBJECTIVELY VERIFIABLE
INDICATORS (OVIs)



OBJECTIVELY VERIFIABLE INDICATORS SPECIFY CLEARLY THE CRITERIA FOR PROJECT SUCCESS

HOW MUCH SUCCESS IS EXPECTED?

- ENOUGH TO ENSURE THAT THE NEXT HIGHER LEVEL OBJECTIVE WILL BE MET
- INDICATORS ADD MEANING TO THE CONCEPT OF NECESSARY & SUFFICIENT CONDITIONS

"OBJECTIVELY VERIFIABLE INDICATORS"

- PERFORMANCE AT EACH LEVEL IS RELATED TO THE TOTAL DESIGN
- TARGETED INDICATORS IDENTIFY QUANTITY, QUALITY & TIME EXPECTATIONS

"OBJECTIVELY VERIFIABLE
INDICATORS" (OVIs)

SPEED RECORD BROKEN

- RAN A MILE IN THREE MINUTES

ADEQUATE HEALTH CARE
DELIVERY SYSTEM
OPERATIONAL

- PROVIDES SERVICES TO ALL WHO NEED SERVICES
- ACCURATE DIAGNOSIS AND EFFECTIVE TREATMENT
- SERVICES PROVIDED IN ALL THE HEALTH SPECIALTIES

HOW MANY INDICATORS?

MINIMUM SET THAT MEASURES WHAT IS IMPORTANT

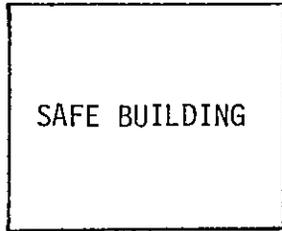
ATTRIBUTES OF GOOD INDICATORS

THEY ARE:

 PLAUSIBLE INDEPENDENT OBJECTIVELY VERIFIABLE TARGETED

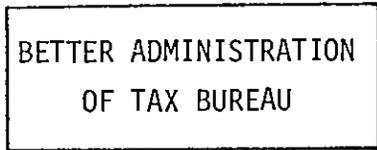
INDICATORS MUST BE PLAUSIBLE

• MEASURES WHAT IS IMPORTANT:



- - - - - - ? - - - - -
- PLEASANT TO SEE
(NOT A MEASURE OF SAFETY!!!)
- —————> STRUCTURALLY SOUND
- —————> ALTERNATIVE EXITS
- —————> SEALED WIRING

• CHANGES ARE ATTRIBUTABLE TO PROJECT, NOT TO OTHER FACTORS:



- - - - - -
- INCREASE IN TAX REVENUE

↑

NOT A SUFFICIENT MEASURE:

MAY RESULT FROM INCREASE
IN INCOME RATHER THAN FROM
BETTER ADMINISTRATION

INDICATORS MUST BE INDEPENDENT

	OVI's
<u>GOAL:</u> Fishermen's Income Increased	?
<u>PURPOSE:</u> Fish Catch Increased	?
<u>OUTPUTS:</u> 1. Fishermen Instructed in New Techniques	1. 400 Fishermen instructed by 1978. 2. 380 Fishermen correctly use new techniques by 12/79.

- OUTPUTS CANNOT BE USED

TO PROVE ACHIEVEMENT OF PURPOSE

- DEFINING OVI'S SHOULD HELP ESTABLISH WHAT YOU MEAN BY
"INCREASED"

INDICATORS MUST BE OBJECTIVELY VERIFIABLE

- ASSESSMENT OF PROJECT ACHIEVEMENT DEPENDS ON EVIDENCE RATHER THAN OPINION

"A herd of good-looking cows"

DEPENDS ON OPINION:

- What do you believe is good-looking?
- Is a herd 10 or 1,000?

"400 Black Angus cows weighing between 1,800 and 2,000 pounds"

DEPENDS ON OBJECTIVE EVIDENCE

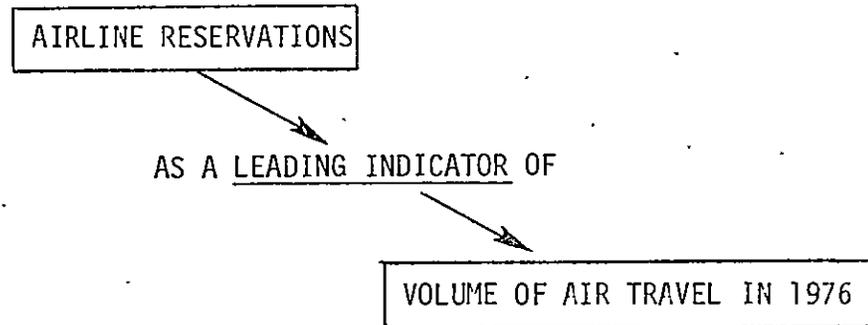
INDICATORS MUST BE TARGETEDLEVELS OF ACHIEVEMENT MUST BE SPECIFICALLY DEFINED:

HOW MUCH? (QUANTITY)
 HOW WELL? (QUALITY)
 BY WHEN? (TIME)

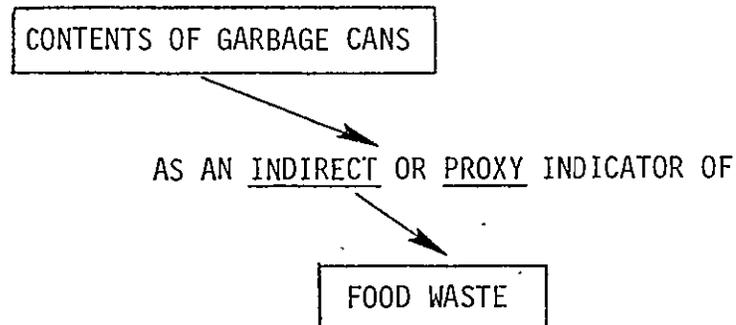
STEP ONE:	<u>IDENTIFY INDICATOR</u> Course Graduates Employed
STEP TWO:	<u>QUANTIFY ACHIEVEMENT</u> <u>200</u> Course Graduates Employed
STEP THREE:	<u>SET QUALITY STANDARDS</u> <u>200 Course Graduates Employed in Positions that Require Knowledge of Chemistry</u>
STEP FOUR:	<u>SPECIFY TIME FRAME</u> <u>200 Course Graduates Employed in Positions that Require Knowledge of Chemistry by September, 1976.</u>

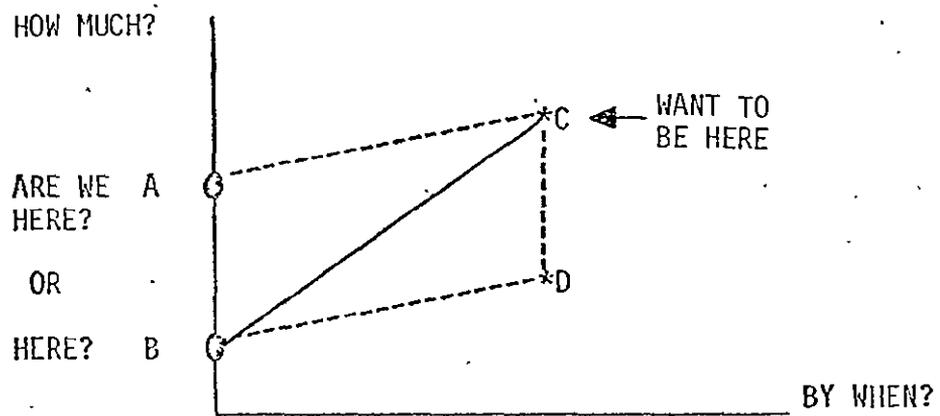
SELECTING INDICATORS IN SPECIAL SITUATIONS◦ WHEN THERE IS A NEED FOR EARLY INFORMATION:

SELECT INDICATORS OF SOMETHING THAT CAN BE ASSESSED
NOW THAT WILL PREDICT LATER PERFORMANCE

◦ WHEN IT IS DIFFICULT TO OBTAIN DATA DIRECTLY:

SELECT INDICATORS THAT CORRELATE CLOSELY WITH THE
INDICATOR OF PRIMARY INTEREST



BASELINE DATA

- AFFECTS RESOURCE ALLOCATION
- NECESSARY FOR EVALUATION
- TREND DATA CAN BE A SUBSTITUTE.

MEANS OF VERIFICATION FORCES US TO EXAMINE

- WHETHER THE EVIDENCE OF ACHIEVEMENT WILL
BE AVAILABLE?

- HOW WILL THE EVIDENCE BE OBTAINED?

<u>PROJECT PURPOSE</u>	<u>OBJECTIVELY VERIFIABLE INDICATOR</u>	<u>MEANS OF VERIFICATION</u>
Low income families own homes	<ul style="list-style-type: none"> ● <u>2,000 new single family dwellings purchased by low income, former tenement residents by June, 1977.</u> 	<p>SALES RECORDS FROM LAND OFFICE--# of sales and sales date</p> <p>DATA ON PURCHASER'S INCOME LEVEL FROM TAX RECORDS</p> <p>DATA ON PURCHASER'S FORMER RESIDENCE FROM LAND OFFICE</p>

- SOURCES OF EVIDENCE ON ALL IMPORTANT ELEMENTS OF AN INDICATOR ARE NEEDED.

LOGICAL FRAMEWORK

NARRATIVE SUMMARY		MEANS OF VERIFICATION	ASSUMPTIONS
S. WEST REGION ECONOMICALLY VIABLE			
<u>PURPOSE:</u> SMALL FARMER IN- COME ABOVE POV- ERTY LEVEL	INCOME RISES FROM ₱200 PER HOUSEHOLD IN 1972 TO ₱300 IN 1976.	SPECIAL SURVEY OF HOUSEHOLDS	ANNUAL INFLATION RATES NO MORE THAN 8%.
<u>INPUTS:</u> DESIGN, CONDUCT & ANALYZE SURVEY	TIME & MONEY		

- SPECIAL DATA COLLECTION EFFORTS HAVE IMPLICATIONS FOR PROJECT ACTIVITIES AND PROJECT COSTS.

SPECIFYING MEANS OF VERIFICATION FORCES GREATER
CLARITY IN OVERALL DESIGN .

- INDICATORS THAT ARE NOT VERIFIABLE NEED TO BE
CHANGED.

- MEANS OF VERIFICATION THAT ARE TOO EXPENSIVE
MUST BE RECONSIDERED.

- HELPS CLARIFY WHAT YOU MEAN AND GETS RID OF
VAGUE WORDS LIKE INCREASE, IMPROVE, HELP, ETC.

"OBJECTIVELY VERIFIABLE
INDICATORS" (OVIs)

SPEED RECORD BROKEN

- RAN A MILE IN THREE MINUTES

ADEQUATE HEALTH CARE
DELIVERY SYSTEM
OPERATIONAL

- PROVIDES SERVICES TO ALL WHO NEED SERVICES
- ACCURATE DIAGNOSIS AND EFFECTIVE TREATMENT
- SERVICES PROVIDED IN ALL THE HEALTH SPECIALTIES

HOW MANY INDICATORS?

MINIMUM SET THAT MEASURES WHAT IS IMPORTANT

SECTION THREE

MANAGEABLE INTEREST

- A. LECTURE NOTES
 - B. CHARTS FOR PRESENTATION
-

A: LECTURE NOTES

OBJECTIVES OF PRESENTATION:

Present the implications of the Logical Framework concepts for delegation of management responsibility and coordination of complex development projects.

DISCUSSION:

The "manageable interest" refers to the tasks (outputs) that a competent manager should be willing to accept responsibility for producing if he is given the resources agreed upon at the start of the project. In a well designed project, each task is necessary for accomplishing higher objectives (purpose and goal) that motivate the project. Achieving the higher objectives does not automatically follow from achieving the tasks because there are important factors outside the project that are necessary too. The hypothesis of a development project is that the project purpose will be accomplished if the project outputs are produced and the outside factors conform to the "important assumptions" we make about them. The project manager should be considered "responsible" for achieving the project "outputs." They are within his "manageable interest." The judgement that development impact (purpose and goal) will follow is "beyond the manageable interest;" the project manager and higher levels of management share the responsibility for the judgement that development impact will result. The project manager is responsible to keep informed about the progress of the project and to inform higher level management about changes that cast doubt on the hypothesis implicit in the project.

In discussing the origins of the Logical Framework concepts, you will recall the major problems that were encountered for evaluating development projects: ambiguous objectives, unclear management responsibilities, and the perspective that evaluation was a threat to project teams and project

managers. The concept of "manageable interest" helps particularly with the second problem--clarifying what the manager should feel responsible for? and why? In the process the manager's objectives are clarified and evaluation becomes an opportunity for the manager to call attention to problems and the need for replanning. This approach fosters a constructive attitude--the sharing of information about objectives and evaluation of progress in an atmosphere that is candid and aimed at improving the project.

How does the concept of "manageable interest" help achieve all this? Quite simply, by making that very important distinction between what we can accomplish (the outputs), and the important results we expect to achieve (purpose); the project manager is accountable for producing outputs with the agreed inputs; he is relieved of the anxiety and worry of being responsible for the development impact. He is not "responsible" for factors outside the project. Because the manager is not being held accountable for unrealistic objectives, he can relax and devote his energies to getting his job done, and not worry about whether or not he will be blamed for other problems.

Let us look at an example which illustrates the usefulness of this way of thinking about development projects.

TOPIC: Barley Example--The Usefulness of Distinguishing between Project Levels (Chart #1)

DISCUSSION:

Use the "barley" example so that participants can spot the problem with the evaluation results; usually this example brings a laugh, and someone from the group should be able to tell you what is wrong with the evaluation results. But it is important to set it up properly and not ask them to tell you what is wrong without preparation.

If the managers of the barley project had been using the Logical Framework approach, they would not have been tempted to conclude the project was progressing as planned and outputs were being produced, but the developmental objectives were failing.

The objective of the project was increasing barley production. The other targets were means to achieve higher barley production. If production went down, the project was not progressing well. The evaluation questions for managers should be (1) why it went down despite the project doing all the tasks to increase barley production? and what to do next based on the unsuccessful experience last year? Perhaps the project design is unsound and needs change (e. g., not enough water in this region)? On the other hand, perhaps there was a storm this year so that despite the bad experience the project design appears sound and managers should continue the original plan.

TOPIC: What is Project Management? (Chart #2)

DISCUSSION:

As in Chart #2; using the barley example for illustration.

TOPIC: Project Manager's Reach (Chart #3)

DISCUSSION:

How far does the project manager's reach extend? The project manager should not be limited to producing outputs with no awareness of why he is producing the outputs. If he is limited he may not manage them effectively and may not see when it is important to inform top management about delays or other problems. He may feel he has to struggle alone with problems that he cannot correct without help. Often he sees the need to change the project but doesn't know how to explain it. Most of us are motivated to do things when we feel they have some significance and importance. There will be many occasions when an output or several outputs may seem to be important in their own right; but frequently they will assume an added significance if we know why we are producing them.

TEACHING POINTS:

The project manager has two clear types of responsibilities:

1. Efficient production of outputs--for which he can be held accountable.

2. Constant monitoring of progress towards purpose and reporting to top management any problems that look as though they will interfere with achievement of purpose; while he is not responsible for actually producing the purpose, he is responsible for keeping top management informed about matters concerning the purpose.

This second role of the project manager is key in opening up a candid, objective dialogue with top management focused on improving the project; responsibilities for maintaining this open atmosphere are shared by both the project manager and top management, and this is where evaluation becomes a useful tool for all levels of management in helping to keep this dialogue open and based on facts, rather than opinion.

TOPIC: Project Manager's Responsibilities: Summary of Tasks (Chart #4)

DISCUSSION:

Let us look in a little more detail at the project manager's responsibilities:

1. Produce Outputs: We sometimes talk about a "management contract." The manager's task should be defined clearly enough that it could be put in a contract, i.e., he knows what he is expected to produce, how much, of what quality and by when. He should know what is expected to happen as a result of the specified outputs and agree that these results (purpose) are indeed the probable result of the outputs. Even when there is no written contract, the project manager implicitly accepts a "management contract" to produce outputs and ensure, as best he can, that they remain relevant to achieving the agreed purpose.

There are many technical management tools available to the project manager to assist him in implementing the project, e.g., LogFrame, scheduling techniques, etc. He also uses influence, persuasion, and coordination to use resources to produce outputs, especially in projects that involve subcontractors, several ministries, or even different departments within the same ministry.

2. The project manager is responsible for monitoring assumptions about all levels of the project. He is closest to the day-to-day operations and will often be the first to learn about problems that may adversely affect his project--e.g., sudden increase in the cost of fertilizer.
3. Resulting from his monitoring of the assumptions and the daily operation of this project, he should recognize deviations from plan important enough that higher management should be informed of problems. Reporting requirements are project unique and should be

set up in advance with higher management to guide the project manager on what and when problems should be reported.

4. When the manager alerts higher management to problems, he should also make recommendations for corrective action, with a summary of the alternative actions and the implications of those actions and perhaps some of the reasons for making the specific recommendations. The project manager is closest to the project and should give higher management the benefit of his insight and understanding. Top management may or may not take his recommendations after considering other factors which may affect the project direction and the broader program it is contributing to. Their decisions will be improved by the project manager's recommendations, especially where they are based on facts and made early enough to influence the problem.

TEACHING POINTS:

1. Project manager accountable for producing outputs and alerting higher management when achieving purpose becomes doubtful.
2. Concealing problems even temporarily is dangerous. Project managers should be rewarded for prompt, honest reporting and practical recommendations about what to do about replanning. Prompt replanning can make a partial success of complete success out of a potential failure.
3. The project manager should normally manage the project. He should be able to make the day-to-day decisions affecting outputs. By distinguishing between purpose and outputs it in fact becomes easier for higher level management to leave the manager free to make decisions about outputs--they can be confident of being called

in to make decisions concerning problems with purpose. This kind of approach relieves top management of dealing with a level of detail which tends to take too much of their valuable time, and leaving them freer to deal with the important issues and longer range program planning and implementation.

REFERENCES:

Management and Machiavelli: An Inquiry into Politics of Corporate Life, by Anthony Jay (1967). (Gives descriptions of many management styles and organizations and the implications of these on getting things done.)

TOPIC: Responsibility of Program Planner--example demonstrating the usefulness of sharing higher level objectives with lower levels of management. (Chart #5).

DISCUSSION:

We have talked about the project manager's responsibility for producing outputs and alerting higher management when purpose achievement is in doubt. The project manager could not do this if he did not know what the purpose was; program planners and higher levels of management must clarify for their project managers the higher level objectives so the lower level manager can fulfill his responsibility for alerting top management to important problems.

Talk through example in Chart #5. If the price of rice drops drastically, it may be better to use agriculture extension resources to shift land and people into other crops, not pushing more rice.

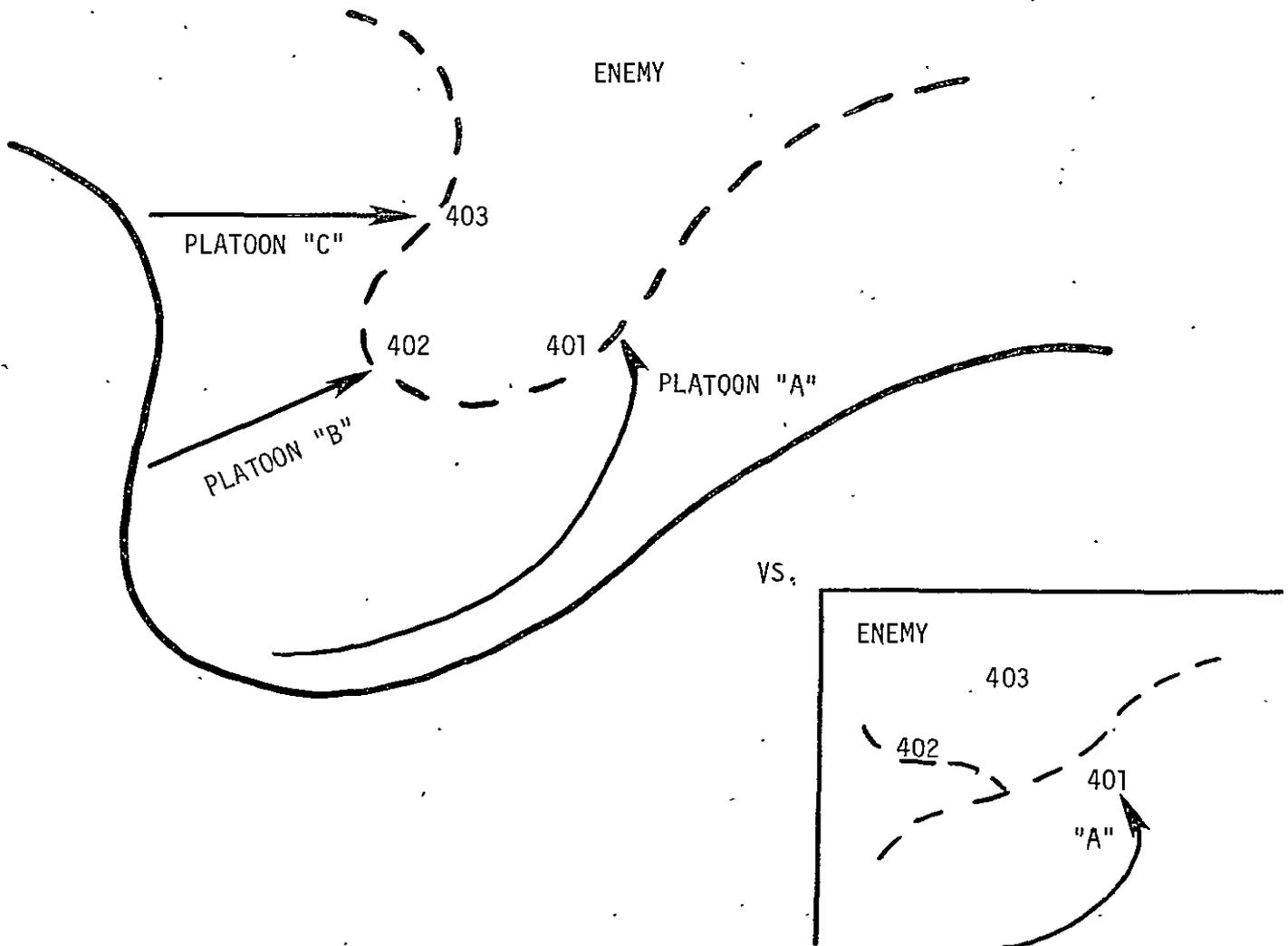
TEACHING POINTS:

1. Higher level management should clarify the objectives above the level of manageable interest with their project managers to help motivate them (showing that their efforts are important) and also to help them do a good job in a responsible manner.
2. This style of management differs from the traditional style of vertical authority management. It works elsewhere and is worth trying.

EXAMPLE: CLARIFY "WHY" TO THE LEVEL ABOVE THE "MANAGEABLE INTEREST"

- Division to Company
Envelop enemy salient
- Company to Platoons
Take hills 401, 402, 403

If "Platoon A" does not know the higher-level objective (enveloping the salient), he will persist in trying to gain his limited objective ("Hill 401") after it is irrelevant (e.g., the salient has broadened or the platoons are lost).



TOPIC: Bringing Realism to Project Design (Chart #6)

DISCUSSION:

I am sure you have struggled with projects that were sold based on a lot of rhetoric about the wonderful things that were going to be achieved in a short time by this marvelous project; probably you were at the other end of the project, with responsibility for trying to make that rhetoric actually happen. Usually, the project designers do not deliberately set out to design a project that just looks good on paper; they know that funds will not be available unless the project looks as though it will make a significant impact on a key problem. Therefore they design the project including wishful thinking about what could happen. When objectives are stated ambiguously there is no clear measure of what success means; it is easy to state the expected impact in grandiose and significant words. A foreign consultant was asked to come to a developing country for nine months with the modest objective of raising agricultural production by 5%! The management style taught here is that realism will lead to better plans and better results. A responsible management viewpoint starts in the design process asking questions about how we plan to implement the project? What are realistic time frames? What do we expect if the project is successful? It becomes easier to recognize rhetoric and lower objectives to a realistic level that makes the project more implementable. This carries the risk that projects may not get funded unless those who approve projects for funding understand the implications of a thrust for more realism in projects. Decision-makers must understand that realistic targets will result in better management and a higher probability of success. Targets that are actually achieved are surely better than large, grandiose sounding targets that remain pie in the sky.

TEACHING POINTS:

1. Gap between project design rhetoric and possible implementation realities needs to be closed.
2. Projects with realistic and clearly stated objectives are more likely to succeed than exaggerated and probably ambiguously stated objectives.
3. "Where there is a way, there is a will." If a manager sees a possibility of success, he is more likely to exert himself to achieve it. Where the task appears hopeless and overwhelming, he may despair and not really try.

EXAMPLES OF UNREALISTIC OBJECTIVES:

- a. Project design to have 90% of farmers using an expensive and advanced technology in an area that was previously traditional in only two years.
- b. Family planning project promising that within two years 90% of all women of child-bearing age would be using contraceptives.

TOPIC: Problem of Responsibility with Limited Authority (Chart #7)

DISCUSSION:

Suppose now that we have helped to design a realistic project with clearly defined targets; the project manager is fully committed to achieve the objectives of the project. Are his problems over? No, of course not. He still has to implement the project which carries its own problems; typically he will not have the authority to command all the things necessary to achieve the purpose. There are key factors outside the project. As in this example, describe and discuss example about rice production depending on fertilizer and credit where the Changwat level manager can only use influence and persuasion.

So What Can He Do?

1. He can actively manage the things that are in his control or where he does have authority.
2. He can use influence and persuasion in the other areas. One approach is to involve the other organizations in the project so they share his objectives. In this example, suppose 200 tons of fertilizer are needed and the Ministry of Finance must import them for delivery at planting time. If you just request fertilizer and stop there, they may not give your request the priority and attention it deserves. If they understand the urgency of the request and the importance of the fertilizer for increasing rice production, you will have a better chance of getting cooperation and prompt attention. This is not a panacea but it does work. It is required for complex projects that require coordination over time. Sharing of objectives can enlist cooperation of organizations that may not work well together normally.

TEACHING POINTS:

Sharing higher level of objectives with those whose help and assistance you need can increase their willingness to cooperate.

EXAMPLE:

1. This is a very simple example but clearly illustrates this point. During a training session, very similar to this one, one of the trainers had to get some Logical Frameworks photocopied so that participants, after the tea break, could see the results of their work in workshops, and more easily follow the critique process which would result in their better understanding the concepts.

The first trainer went to the print shop and asked the people in charge for 30 copies of three Logical Frameworks. The printer said they were too busy and turned down the request despite desperate pleas of how urgently they were needed. The trainer returned to the seminar room utterly downcast, so a second trainer returned to the print shop. She explained to the printer why they were there training, what they were trying to accomplish with the seminar, and how important the copies of the Logical Framework would be to members of the seminar. Upon hearing this, the printer was drawn into the higher level objectives of the seminar and became personally involved in wanting it to be a success--the task he was being asked to do took on a more significant dimension and he became willing to do it; the job was done with three minutes to spare! This is admittedly a trivial example, and I'm sure many of you have more significant examples to give, but it does illustrate the point.

2. The success of the NASA space program to put a man on the moon can, in great part, be attributed to the fact that the major level objective was shared throughout the USA. People working on what might appear to be insignificant tasks knew that his/her contribution would ultimately help in the overall task. Therefore, the tasks were not insignificant; they became filled with all the aura and magic of a grand program. They generated determination and dedication even for the obscure tasks. They were inspired by the most visible aspects of the program--the actual training of spacemen, photos of simulated moon landings, etc. After all, the tasks were oriented to and necessary for putting a man on the moon (and getting him back alive).

TOPIC: Grouping Inputs to Simplify Management (Chart #8)

DISCUSSION:

For each output we identify the set of necessary and sufficient inputs to achieve the outputs. It helps to group the inputs together for each output and number the inputs by the output they are needed for.

TEACHING POINTS:

1. The simplicity of the Logical Framework format helps communication as well as organizing the project for the manager. Each project element can be seen in relation to all the other project elements. Organizing inputs by corresponding outputs helps clear thinking at the start of the project.
2. It also helps for replanning later if the project changes or the budget is cut.

TOPIC: Delegation of Responsibility (Chart #9)

DISCUSSION:

It is easier to delegate responsibility when the manager has a clear specification of each output and the necessary inputs to produce it. The output can be assigned to a specific person or group of people in the same organization. On a big project, some outputs can be delegated to other organizations, or contractors and even subcontractors. Each output defines a task or group of tasks. The purpose is a shared objective and the basis for coordination by the project manager.

TEACHING POINTS:

1. Clear and logical relationships between inputs and outputs can lead to effective delegation of tasks and corresponding authority to get those tasks done.
2. The same logic allows program managers to delegate the parts of their programs (projects) to others.

TOPIC: Summary of Three Major Teaching Points of Manageable Interest Presentation

1. The Logical Framework approach to management emphasizes that the project manager could responsibly commit himself to produce a set of clearly stated outputs given a set of inputs he agreed to at the start of the project. Measurable targets for achievement of those outputs and inputs and clear assumptions about outside factors define the commitment in realistic terms. This is the "manageable interest" or "management contract."
2. Clarifying the "purpose" and "goal" of the project will help the project manager recognize when the project is getting in trouble and plans should be changed. This may happen because of problems within the project or changes outside the project. The project manager is responsible for keeping well informed about the progress of the project and alerting other interested parties promptly if it becomes doubtful that purpose or goal will be achieved. This should lead to earlier replanning.
3. The Logical Framework approach to organizing a project helps high level managers to responsibly delegate projects to project managers. It helps project managers to delegate tasks (outputs) to other organizations or contractors without losing control. It becomes clearer what kind of problems are important and that they should be communicated promptly rather than concealed.

B. MANAGEABLE INTEREST CHARTS FOR PRESENTATION

INDICATOR	TARGET	STATUS
FERTILIZER USED	100,000 TONS	100,000 TONS
AG. EXTENSION OFFICERS IN PLACE	7	7
NEW BARLEY SEED USED	2,000 TONS	2,000 TONS
BARLEY PRODUCTION INCREASED		

EVALUATION RESULT: PROJECT PROGRESSING WELL, 75% OF EXPECTATIONS MET!!!

WHAT IS PROJECT MANAGEMENT?

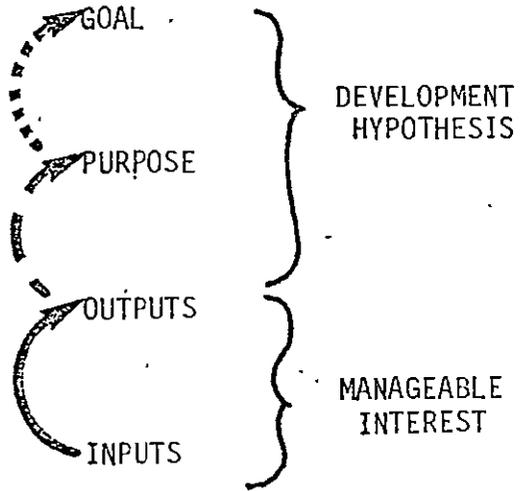
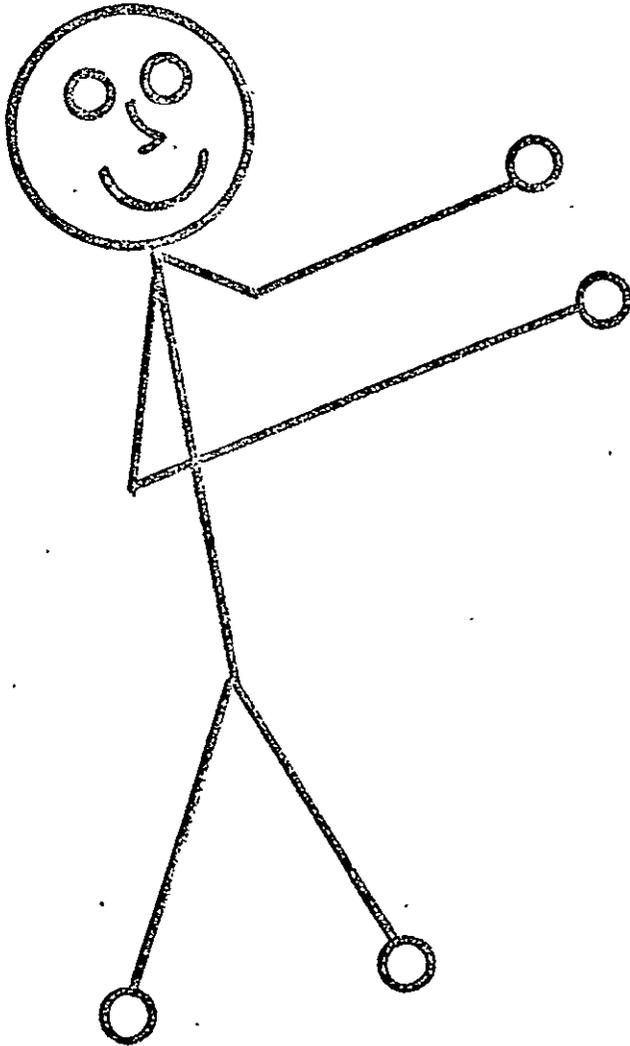
PROCESS OF TRANSLATING ACTIVITIES & RESOURCES (INPUTS)

INTO THOSE THINGS WE CAN ACCOMPLISH (OUTPUTS)



AIMED AT ACHIEVING THE IMPORTANT RESULTS WE EXPECT (PURPOSE AND GOAL)

HOW FAR DOES THE
PROJECT MANAGER'S
REACH EXTEND.....



THE PROJECT MANAGER'S RESPONSIBILITIES:

1. PRODUCE OUTPUTS -- A MANAGEMENT "CONTRACT"
 - PERSONAL COMMITMENT
 - MANAGEMENT TOOLS, e.g. LogFrame
 - Scheduling Techniques
 - Influence, Persuasion, Coordination
2. MONITOR ASSUMPTIONS
3. ALERT TOP MANAGEMENT WHEN
 - A. OUTPUT ACHIEVEMENT UNCERTAIN
 - B. OUTPUTS BEING PRODUCED ON SCHEDULE BUT NOT LIKELY TO RESULT IN PURPOSE
4. RECOMMEND CORRECTIVE ACTIONS

RESPONSIBILITY OF PROGRAM PLANNER

CLARIFY THE "WHY" AT THE
LEVEL ABOVE "MANAGEABLE" INTEREST

DIRECTOR TO REGIONAL DIRECTOR:

GOAL: SMALL FARMER INCOME
ABOVE POVERTY LEVEL

REGIONAL DIRECTOR TO PROVINCE
AGRICULTURAL EXTENSION DIRECTOR:

PURPOSE: SMALL FARMER RICE
PRODUCTION YIELDS
2 TONS/PER YEAR
ABOVE SUBSISTENCE

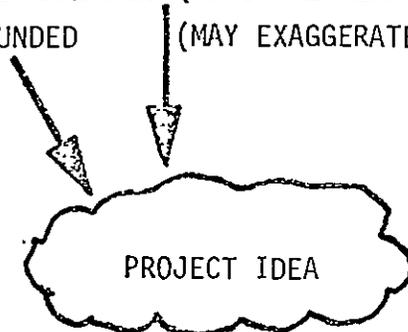
OUTPUTS: 1. HYV SEED DISTRIBUTED
2. FERTILIZER DISTRIBUTED
3. FARMERS TRAINED

IF THE PROVINCE AGRICULTURAL EXTENSION DIRECTOR DOES NOT KNOW WHY HE IS INCREASING RICE PRODUCTION, HE MAY CONTINUE WITH HIS PROJECT AS IS EVEN THOUGH HE HAS LEARNED THAT THE PRICE OF RICE HAS JUST DROPPED SUBSTANTIALLY.

POSSIBLY CONFLICTING OBJECTIVES OF PROJECT DESIGNER AND PROJECT MANAGER:

INITIAL DESIGN OBJECTIVES

- MEET TOP LEVEL MANDATES (NATIONAL PLAN GUIDELINES)
- GET PROJECT FUNDED (MAY EXAGGERATE EXPECTED IMPACT)



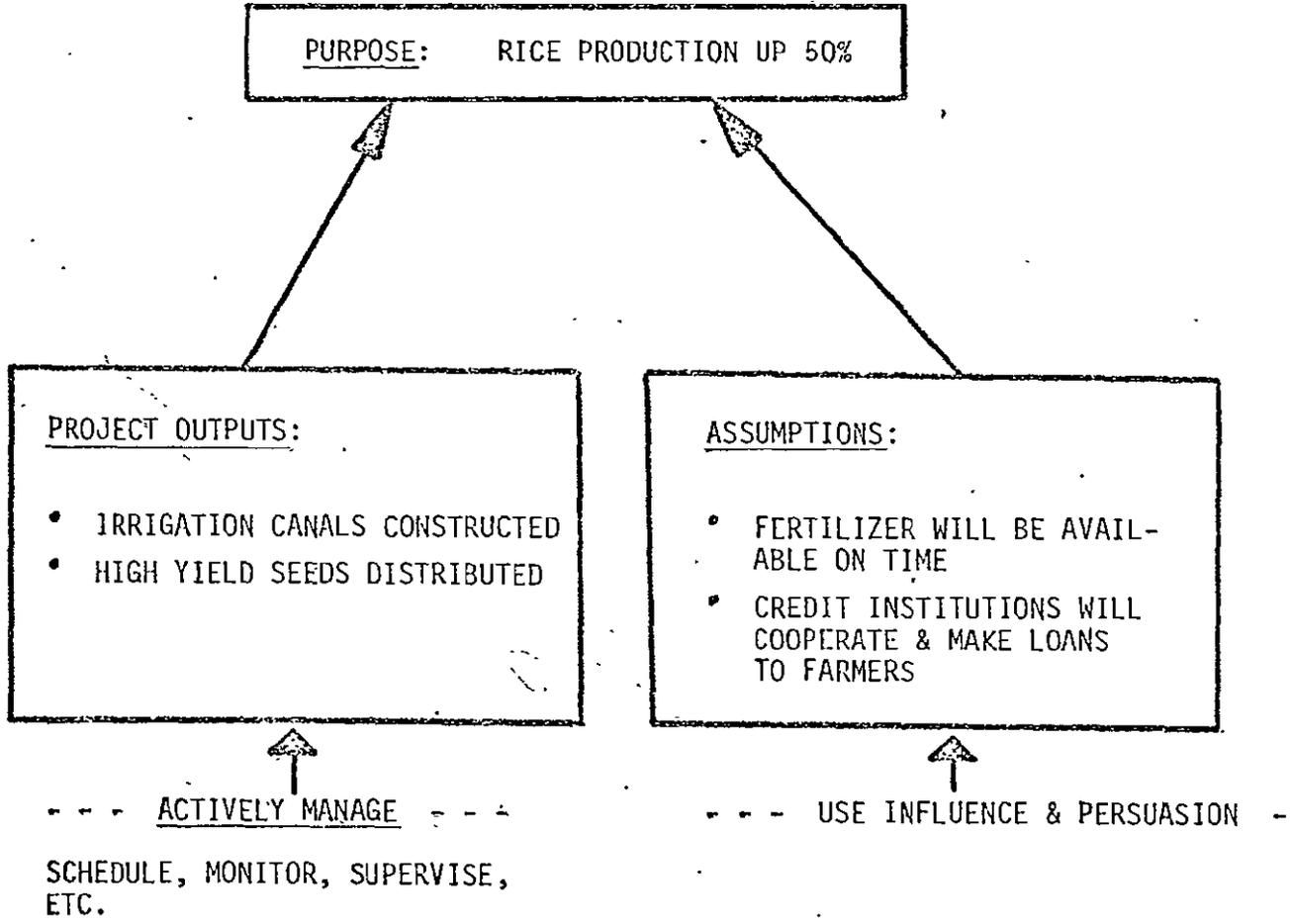
IMPLEMENTATION OBJECTIVES

- ACHIEVE PLANNED IMPACT (DIFFICULT IF DESIGN EXAGGERATES EXPECTED IMPACT)
- WITHIN RESOURCE CONSTRAINTS

LOGICAL FRAMEWORK CAN HELP REDUCE CONFLICTS BY FACILITATING SETTING OF REALISTIC OBJECTIVES IN ADVANCE.

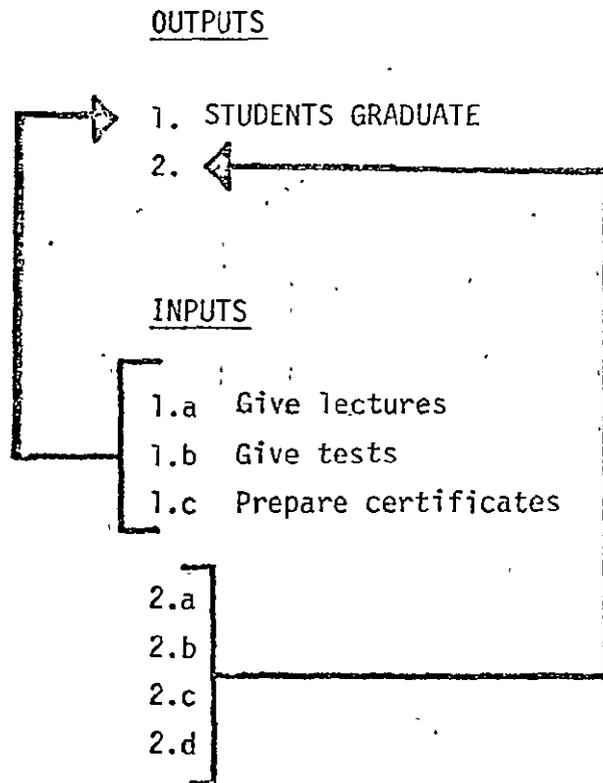
MANAGER'S PROBLEM:

RESPONSIBILITY WITH LIMITED AUTHORITY



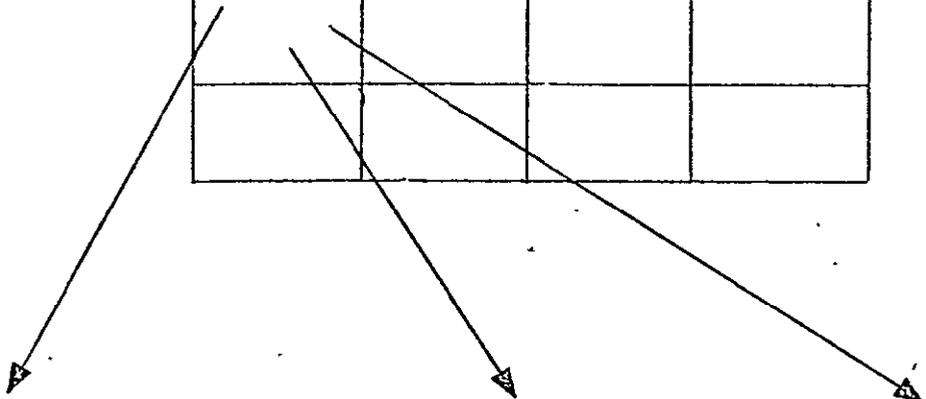
SIMPLIFY THE MANAGEMENT TASK

IDENTIFY NECESSARY INPUTS FOR EACH OUTPUT AND GROUP EACH SET OF INPUTS BY CORRESPONDING OUTPUTS.



THE LOGICAL FRAMEWORK SERVES AS A BASIS FOR FURTHER DELEGATION OF RESPONSIBILITY

LOGICAL FRAMEWORK



<p>OUTPUT</p> <p>1. Appropriate course materials ready to use</p>
<p>INPUTS</p> <p>1a. Develop course materials</p> <p>b. Test course materials</p>

<p>OUTPUT</p> <p>2. Students graduate</p>
<p>INPUTS</p> <p>2a. Give lectures</p> <p>b. Give tests</p> <p>c. Prepare certificates</p>

<p>OUTPUT</p> <p>3. Valid & reliable tests ready to use</p>
<p>INPUTS</p> <p>3a. Develop tests</p> <p>b. Test tests</p>



Tom
(CONTRACTOR)



Kim
(UNIVERSITY)



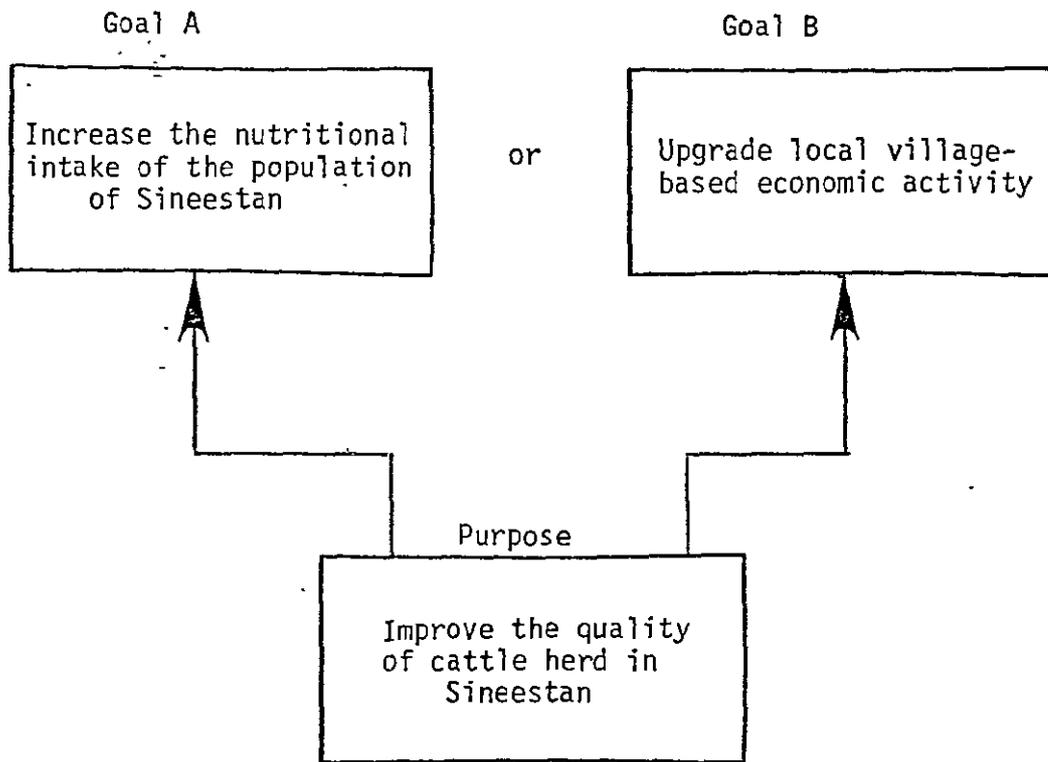
Jose
(ADVISOR)

FIGURE IV-1LOGICAL FRAMEWORK NARRATIVE STATEMENTS
ARE THE INVERSE OF A PROBLEM STATEMENTPOTENTIAL SOLUTION (LOGFRAME)

<u>PROBLEM</u>	<u>NARRATIVE STATEMENT</u>	<u>OBJECTIVELY VERIFIABLE INDICATORS</u>
Poor quality of cattle herds.	Improved quality of cattle herds.	<ol style="list-style-type: none"> 1. Incidence of foot and mouth disease less than <u>20%</u> of herd. 2. Average carcass weight increases by 10 kg. annually. 3. ETC.
OR	OR	OR
Human malnutrition in Sineestan.	Increase nutritional intake of residents in Sineestan.	<ol style="list-style-type: none"> 1. Each person has average daily intake of 2000 calories. 2. Children under 10 years of age get 40 grams of protein daily. 3. ETC.

FIGURE IV-2

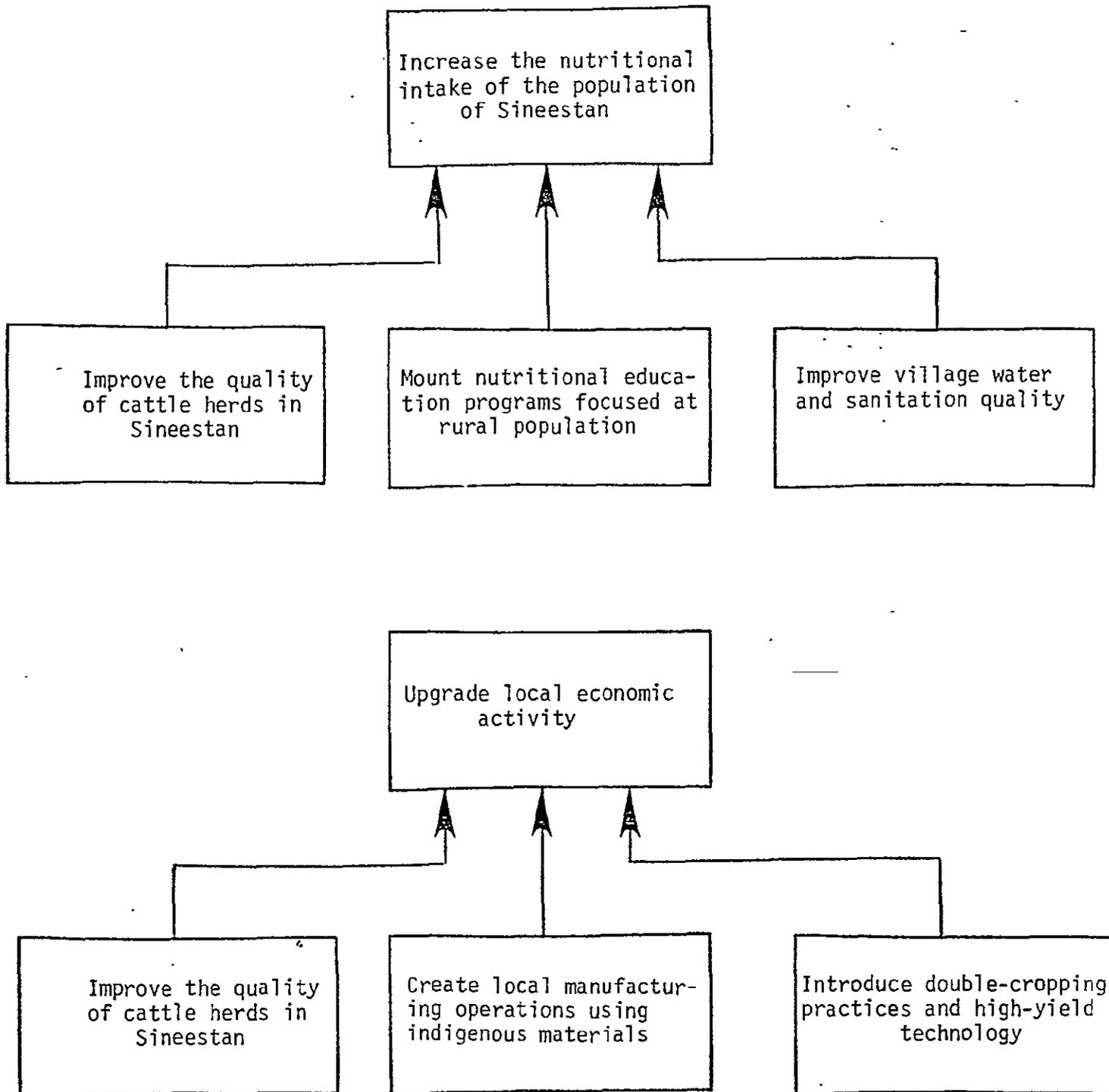
EXPLANATION OF PROJECT PURPOSE



A PROJECT PURPOSE CAN SUPPORT ALTERNATIVE GOALS.
DEFINITION OF THE PROBLEM AND MEANS OF SOLUTION.
AT TOO LOW A LEVEL MEANS WE MAY MISS THE MAIN PRO-
JECT INTENT.

FIGURE IV-3

DEFINING PROBLEM AND PROJECT INTENT



WHEN THE MAJOR PROBLEM AND MAIN PROJECT INTENT
ARE CLARIFIED, WE CAN DEFINE ALTERNATIVE METHODS
OF GETTING THERE.

REVIEW OF LOGICAL FRAMEWORK
CONCEPTS

NAME: _____

	TRUE	FALSE
1. Achievement of purpose can be proven by measuring output level achievement.		
2. All conditions necessary to the project's success must be fully under the control of the project manager.		
3. Although the project manager shares responsibility for purpose-level achievement, his "manageable interest" relates to his responsibility to produce outputs.		
4. Use of OVIs permits comparison with actual accomplishments at a given project level against planned objectives.		
5. End-of-Project Status is measurable at the output level.		
6. The usefulness of an indicator is related to the availability of reliable data to support and verify the indicator.		
7. If an assumption is found to have a low probability, the project manager should take corrective action.		
8. To be most effective in project design, indicators should be set in general terms.		
9. Each level of the "Logical Framework" is designed to contain the necessary and sufficient conditions to reach the next higher level.		
10. The project manager is held accountable for goal level achievement.		
11. The means of verification are the data sources and methods of collecting the data through which accomplishment at a given stage of a project can be objectively verified.		
12. Objectively verifiable indicators are useful in measuring project progress. They demonstrate <u>what</u> will be measured.		
13. The Logical Framework guarantees that projects will be properly managed.		

	TRUE	FALSE
14. The purpose describes what must be done in order to produce the project outputs.		
15. The EOPs describe <u>how</u> you will know when the project purpose has been achieved.		
16. The development of objectively verifiable indicators permits greater confidence in the linkages between goal, purpose, outputs, and inputs.		
17. Assumptions are within the control of the project manager.		
18. Evaluation suggests whether and how the project should be replanned.		
19. A project design, once established, should not be altered.		
20. All possible data should be collected for a project evaluation in the chance that some of it will prove useful.		
21. Even if a project is successful on all levels, causality between the levels cannot be assumed.		
22. An evaluation is more meaningful if the conditions that existed before the start of the project are known.		
23. Evaluation should only occur after the project is completed.		
24. Timing evaluation results to be made available prior to when important decisions must be made is most useful.		

SHORT EXERCISES ON MANAGEABLE INTEREST

In the following cases, identify the outputs and/or inputs which should not be in the manageable interest of the project manager.

1. Outputs:

National Highway Constructed _____
Increase in the amount of merchandise transported
by road _____

Inputs:

Recruit competent technical personnel _____
Obtain the materials and equipment _____
Construct the national highway _____

2. Outputs:

Two wells drilled in the village _____
Two pumps installed _____

Inputs:

Select the site _____
Drill the wells _____
Make potable water available to the village _____
Install the pumping equipment _____

3. Outputs:

100,000 tons of fertilizer used. _____
300 agriculturalists trained _____
Agricultural revenues increased _____
Productivity per hectare increased _____

Inputs:

Deliver the fertilizer _____
Recruit people to be trained _____
Select the Training Site _____
The agriculturalists cooperate with the new scheme _____

Short Exercises on Manageable Interest/Continued

-2-

4. Outputs

Program of Home Visitation in Operation _____

Community health Standards Raised _____

All School Children Immunized _____

Health Education Materials Developed _____

Inputs:

Hire 4 Doctors and 2 Nurses _____

Purchase Medical Supplies _____

Purchase two motor-bikes _____

Write Lesson Plans _____

5. Outputs:

Publicity campaign conducted _____

Brochures distributed and read _____

Inputs:

Draft the publicity message _____

Print the circulars _____

Prepare and launch the campaign _____

Distribute the circulars to the homes _____

SHORT EXERCISES ON ASSUMPTIONS

- Identify and write in at least one assumption for each of the examples below.

<u>EXAMPLE</u>	<u>ASSUMPTION</u>
<p>I</p> <p><u>Output:</u> Training program in Management II organized for the summer of 1978.</p> <p><u>Inputs:</u></p> <ol style="list-style-type: none"> 1. Notify Graduates from Management I 2. Develop curriculum 3. Hire and train staff 	
<p>II</p> <p><u>Output:</u> Reduction in the number of road accidents</p> <p><u>Inputs:</u></p> <ol style="list-style-type: none"> 1. Train highway police 2. Purchase radar equipment 3. Organize a safety inspection program for vehicles 4. Conduct publicity campaign 	
<p>III</p> <p><u>Output:</u> Students' competency in business administration skills are upgraded</p> <p><u>Inputs:</u></p> <ol style="list-style-type: none"> 1. Design refresher course 2. Print diplomas 	
<p>IV</p> <p><u>Purpose:</u> Increase in agricultural revenues</p> <p><u>Output:</u> Increase in rice production.</p>	

SHORT EXERCISES ON ASSUMPTIONS PAGE 2

<u>EXAMPLE</u>	<u>ASSUMPTION</u>
<p>V</p> <p><u>Purpose:</u> Rice Production increased by 50%</p> <p><u>Outputs:</u> 1. Irrigation canals constructed 2. Grain seeds distributed</p>	
<p>VI</p> <p><u>Purpose:</u> Incidence of Malaria Cases in District A Decreased</p> <p><u>Outputs:</u> 1. Agents for malaria campaign trained by December 1977. 2. Anti-malaria health education program designed.</p>	

IDENTIFY AND WRITE IN THREE ASSUMPTIONS FOR EACH OF THE EXAMPLES BELOW:

<p>VII</p> <p><u>Goal:</u> Better use of the national budget</p> <p><u>Purpose:</u> Establishment of a calendar for the allocation of financial resources.</p> <p><u>Output:</u> Participants trained in the rudiments of financial management.</p> <p><u>Input:</u> Offer course in financial management</p>	
<p>VIII</p> <p><u>Goal:</u> National cultural values preserved.</p> <p><u>Purpose:</u> Development of popular music demonstrative of the national character.</p> <p><u>Output:</u> New songs with nationalistic flavor</p> <p><u>Input:</u> Conduct national competition offering scholarships to winners.</p>	

<u>CASES</u>	<u>ASSUMPTIONS</u>
<p data-bbox="263 407 305 441">IX</p> <p data-bbox="263 470 779 533"><u>Goal:</u> African Management System elaborated.</p> <p data-bbox="263 562 824 663"><u>Purpose:</u> Reinforcement and further development of the concepts learned in the management seminar.</p> <p data-bbox="263 688 837 756"><u>Output:</u> Monthly review established: "The African Manager."</p> <p data-bbox="263 785 857 852"><u>Inputs:</u> 1. List of addresses of the graduates of the seminar.</p> <p data-bbox="263 882 906 949">2. Hire a team for editing the review.</p> <p data-bbox="263 978 935 1045">3. Develop a list of writers and editors.</p> <p data-bbox="263 1075 808 1142">4. Amass a collection of suitable articles.</p>	

SPOT THE ERROR(S)

SPOT THE ERROR(S)

PURPOSE:

NET COST OF FARM-TO-MARKET TRANSPORT NOT MORE THAN 20% OF SALES PRICE

EOPS:

- 10 MILES OF ALL WEATHER ROADS CONSTRUCTED
- LORRIES USED FOR TRANSPORT

OUTPUTS:

1. ROAD BETWEEN MARKETS A & B CONSTRUCTED
2. NEW MARKET STALLS CONSTRUCTED
3. TRUCKS SOLD TO MARKETING COOPS
4. EDUCATIONAL PROGRAMS OPERATING AT MARKETS A & B

SPOT THE ERROR(S)

NARRATIVE SUMMARY

GOAL: EMPLOYMENT OPPORTUNITIES
CREATED IN RURITANIA
THROUGH PROMOTION OF
SMALL- AND MEDIUM-SCALE
LOCALLY-OWNED ENTERPRISES

PURPOSE: TO ESTABLISH THE RURITANIAN
ENTERPRISES DEVELOPMENT
CORPORATION AS AN EFFECTIVE
STIMULUS TO SMALL-SCALE
INDUSTRY TO CREATE EMPLOYMENT
OPPORTUNITIES.

OBJECTIVELY VERIFIABLE INDICATORS

1. MEASURABLE INCREASE IN
EMPLOYMENT IN RURITANIA'S
SMALL INDUSTRIES SECTOR
1. ENTREPRENEURS WANT TO
START NEW BUSINESSES

EOPS

1. ENTERPRISES DEVELOPMENT
CORPORATION'S REPUTATION
IS GOOD
2. 63 SMALL-SCALE NEW BUSINESSES
HAVE BEGUN OPERATIONS BY
JANUARY 1982, AVERAGING
ANNUAL SALES OF \$30,000

SPOT THE ERROR(S)

OUTPUTS

1. Full complement of Kelsin scientists to run research program.
2. Initial cadre of extension staff trained.
3. Extension courses for farmers organized.
4. Demonstration farms made operational.

INPUTS

1. Funds for capital facilities
2. Funds for operating expenses
3. Equipment package
4. Advisory services.
5. Land and facilities for demonstration
6. Supply of local staff

SPOT THE ERROR(S)

GOAL: INCREASE STANDARD OF LIVING IN RURAL NORTHEAST.

PURPOSE: INCREASE PER CAPITA INCOME OF SMALL FARMERS.

OUTPUTS:

- FERTILIZER USED BY FARMERS
- TECHNICAL ASSISTANCE OFFICERS IN PLACE
- INCREASE WHEAT PRODUCTION
- HIGH YIELD VARIETY SEEDS DISTRIBUTED
- IRRIGATION SYSTEM FUNCTIONING

SPOT THE ERROR(S)

PURPOSE:

"TO INTRODUCE BASIC INNOVATIONS IN THE SECONDARY EDUCATION SYSTEM IN THE FIELDS OF CURRICULUM DESIGN AND METHODOLOGY ..."

EOPS INDICATORS?:

- "1. THE NEW CURRICULUM HAS BEEN DESIGNED ...
2. THE FACULTIES OF EDUCATION ARE ORIENTED ...
3. CURRICULUM AND SCHOOL ORGANIZATION EXTENDED TO SATELLITE SCHOOLS ...
4. MINISTRY OF EDUCATION HAS BEEN REORGANIZED."

SPOT THE ERROR(S)

NARRATIVE SUMMARY

ASSUMPTIONS

GOAL: Balance of Payments surplus achieved.

PURPOSE: Self-sufficiency in petroleum obtained.

1. Trainees will be given responsible positions
 2. No. of barrels per day continue to be as estimated in feasibility studies.
-

- OUTPUTS:
1. Deep-well drilling rigs constructed
 2. Kelsin crews competent in the use of deep-well drilling rigs
 3. Coordinating organization for petroleum industry established.
-

1. There will be no tidal waves
 2. Equipment for constructing rigs will be of good standard
 3. Incentives for working on the rigs will be high enough
-

- INPUTS:
- 1.a. Select site for wells
 - b. Issue bids
 - c. Select contractor
 - d. order equipment and machinery
 - e. Begin construction of wells.
 - 2.a. Select trainees
 - b. Develop course
 - c. Train crews
 - 3a. Develop organizational procedures
 - b. Assign high level Government staff to run the organization
 - c. Select and train supporting staff
 - d. Select and furnish offices

1. World price of oil stays high

LOGICAL FRAMEWORK
FOR
SUMMARIZING PROJECT DESIGN

Est. Project Completion Date _____

Date of this Summary _____

Project Title: _____

MANAGEABLE INTEREST

DEVELOPMENT HYPOTHESES

If Inputs, Then Outputs

If Outputs, Then Purpose

If Purpose, Then Goal

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS																														
<p>Program Goal: The broader objective to which this project contributes:</p> <p>Real income increased for 200 Coop members.</p>	<p>Measures of Goal Achievement:</p> <ol style="list-style-type: none"> Real medium income increased from Baht 500 in 1/77 to Baht 650 by 12/78. 		<p>Concerning long term value of program/project:</p> <ol style="list-style-type: none"> Farmers will pay off old debts Rural economy will be stimulated. 																														
<p>Project Purpose:</p> <p>Profitable Duck Farm Cooperative established.</p>	<p>Conditions that will indicate purpose has been achieved: End of project status.</p> <ol style="list-style-type: none"> 5000 eggs sold/month by 12/78. 10% net profits after eggs sold. Long waiting list of future clients established by 12/78. Breakage during collection/transportation does not exceed 5%. 		<p>Affecting purpose-to-goal link:</p> <ol style="list-style-type: none"> Taxes not exceed 20% of salaries. Essential consumer goods prices do not increase beyond 5%/year. Profits shared equally among all coop members. 																														
<p>Outputs:</p> <ol style="list-style-type: none"> Farm buildings constructed. Fat, healthy ducks raised. Staff trained. 	<p>Magnitude of Outputs necessary and sufficient to achieve purpose.</p> <ol style="list-style-type: none"> <ol style="list-style-type: none"> 2 sheds for 100 ducks each constructed by 12/77. Sheds light and airy and meet pre-set specifications. <ol style="list-style-type: none"> 200 ducks--average wt. 10 kg. raised by 6/78. 90% ducks are high quality egg layers of Grade I eggs. <ol style="list-style-type: none"> Foreman and 3 staff trained by 12/77. All carry out duties specified in job description. 		<p>Affecting output-to-purpose link:</p> <ol style="list-style-type: none"> No duck disease epidemics. Demand for duck eggs is sufficient. Prices of eggs do not drop below Baht 1/egg. No accident to egg marketing truck. Insurance costs do not increase. Price of duck feed does not exceed Baht /ton. 																														
<p>Inputs: Activities and Types of Resources</p> <ol style="list-style-type: none"> <ol style="list-style-type: none"> Rent land. Design buildings Construct buildings <ol style="list-style-type: none"> Purchase 220 ducklings. Procure feed grain. Prepare care & feeding procedures. <ol style="list-style-type: none"> Recruit staff with experience. Hold short training course. 	<p>Level of Effort/Expenditure for each activity.</p> <table border="1"> <thead> <tr> <th></th> <th>1977</th> <th>1978</th> </tr> <tr> <th></th> <th>Baht</th> <th>Baht</th> </tr> </thead> <tbody> <tr> <td>1. a)</td> <td>----</td> <td>----</td> </tr> <tr> <td>b)</td> <td>----</td> <td>----</td> </tr> <tr> <td>c)</td> <td>----</td> <td>----</td> </tr> <tr> <td>2. a)</td> <td>----</td> <td>----</td> </tr> <tr> <td>b)</td> <td>----</td> <td>----</td> </tr> <tr> <td>c)</td> <td>----</td> <td>----</td> </tr> <tr> <td>3. a)</td> <td>----</td> <td>----</td> </tr> <tr> <td>b)</td> <td>----</td> <td>----</td> </tr> </tbody> </table> <p>(COOP MEMBERS PROVIDE LABOR)</p>		1977	1978		Baht	Baht	1. a)	----	----	b)	----	----	c)	----	----	2. a)	----	----	b)	----	----	c)	----	----	3. a)	----	----	b)	----	----		<p>Affecting input-to-output link:</p> <ol style="list-style-type: none"> Land owner willing to rent land. No duck disease epidemic. Ducks not eaten by predators.
	1977	1978																															
	Baht	Baht																															
1. a)	----	----																															
b)	----	----																															
c)	----	----																															
2. a)	----	----																															
b)	----	----																															
c)	----	----																															
3. a)	----	----																															
b)	----	----																															

LOGICAL FRAMEWORK
FOR
SUMMARIZING PROJECT DESIGN

Est. Project Completion Date _____
Date of this Summary _____

Project Title: _____

DEVELOPMENT HYPOTHESES
 If Purpose, Then Goal
 If Outputs, Then Purpose
 If Inputs, Then Outputs
 MANAGEABLE INTEREST

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Program Goal: The broader objective to which this project contributes: Family Income Increased	Measures of Goal Achievement: Income Increased \$100/week by 8/78		Concerning long term value of program/project: 1. Pay off debt 2. Cost of consumer goods
Project Purpose: Duck Eggs Sold	Conditions that will indicate purpose has been achieved: End of project status. 80 people sold an average of 5,000 duck eggs/month by 8/78		Affecting purpose-to-goal link: Egg Prices remain stable. Price Duck Feed
Outputs: Duck Farm effectively operated	Magnitude of Outputs necessary and sufficient to achieve purpose. 200 Ducks laying eggs by 2/78 Each Duck lays an average of 7 eggs/week Eggs collected and taken to market with no more than .5% breakage.		Affecting output-to-purpose link: Demand for eggs continues
Inputs: Activities and Types of Resources Rent land Make Design Implement design Manage farm	Level of Effort/Expenditure for each activity.		Affecting input-to-output link: No disease Ducks not frightened.

Project Title: National Pig Industry for Snortland

DEVELOPMENT HYPOTHESES
 If Purpose, Then Goal
 If Purpose, Then Purpose
 If Outputs, Then Outputs
 If Outputs, Then Outputs
 If Inputs, Then Outputs
 MANAGEABLE INTEREST

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p><i>Program Goal. The broader objective to which this project contributes:</i></p> <p>Viable Pig Industry Developed</p>	<p><i>Measures of Goal Achievement:</i></p> <p>1. Annual slaughter of 100,500 pigs which meet national quality standards from 1979 onwards.</p>	<p>1. ADC records 2. Marketing statistics 3. Post reports</p>	<p><i>Concerning long term value of program/project:</i></p> <p>1. 20% of slaughtered pigs will be exported 2. Local population will be able to obtain meat at lower prices</p>
<p><i>Project Purpose:</i></p> <p>To develop a technologically sound pig industry at the level of farm production and marketing</p>	<p><i>Conditions that will indicate purpose has been achieved. End of project status</i></p> <p>Production of a national herd of quality and at cost that is internationally competitive:</p> <p>Standards: Backfat thickness 3.2" Age to reach 240 lb market wt. = 190 days feed to meat conversion ratio = 3:5</p> <p>No. of marketable pigs/sow/yr. = 14 to 15</p>	<p>1. Donor country post reports 2. Production records from Ministry of Agriculture</p>	<p><i>Affecting purpose to-goal link:</i></p> <p>1. Development of stable packing industry 2. Development of training/educational base in meat slaughtering, processing and meat use. 3. Feed availability at competitive prices. 4. Local demand for pig meat maintained.</p>
<p><i>Outputs:</i></p> <p>1. Improved breeding program established 2. An improved extension service 3. Improved methods of marketing developed and being used throughout the country.</p>	<p><i>Magnitude of Outputs necessary and sufficient to achieve purpose.</i></p> <p>1.a) 1,600 litters sired by donor country boars b) 2,850 performance tested pigs produced annually 2. Extension service operating action program by 5/77 3. Nationally operated carcass grading system in place by 5/78.</p>	<p>1. Project progress reports incorporating Agricultural Development Corporation (ADC) data. 2. Post progress reports.</p>	<p><i>Affecting output-to-purpose link.</i></p> <p>1. Snortland implementation of all programs 2. Responsive farm service personnel</p>
<p><i>Inputs Activities and Types of Resources</i></p> <p>Donor Country: 1) Snortlandians trained in a) Performance testing; b) artificial insemination; c) carcass grading and d) Veterinary & health services; 2. "genetic counseling and data analysis service provided 3. Boars; 4. Equipment Snortland: Provide trainees; use of local computer services; project management team.</p>	<p><i>Level of Effort/Expenditure for each activity.</i></p> <p>1a - 4 man months b - 6 man months c. 4 man months d. 3 man months 2. 4 man months @ \$8,000 3. 50 @ \$ each 4. \$20,000</p> <p>Total donor expenditure \$330,000.</p> <p>Total host country: \$ 33,900</p>	<p>1. Project progress reports 2. Post reports 3. Project officer reports.</p>	<p><i>Affecting input to output link.</i></p> <p>1. Appropriate candidates attracted to program and able to undertake training.</p>

LOGICAL NETWORK
SUMMARIZING PROJECT DESIGN

Est. Project Completion Date 1981
Date of this Summary 1/76

Project Title: Public Health in Healand

DEVELOPMENT HYPOTHESES
If Purpose, Then Goal
If Outputs, Then Purpose
If Inputs, Then Outputs
MANAGEABLE INTEREST

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program Goal: The broadest objective is which this project contributes: To raise the quality of life of majority of population and increase chances of success for family planning program by improving quality and increasing the availability of health services for the rural poor.</p>	<p>Measures of Goal Achievement: 1. Increased number of rural health services 2. Improved health of rural sector 3. 20% decrease in morbidity over next 20 years 4. Improved preventative medical services 5. Decrease in population growth rate.</p>	<p>1. Government statistics 2. Mission Report 3. UN Statistics 4. WHO reports.</p>	<p>Concerning long term value of program/project:</p>
<p>Project Purpose: To assist the Institute of Hygiene and Preventative Medicine establish and staff a college to train medical officers in social and preventative medicine and to assist in the training of basic health workers to staff health units as part of the Peoples Health Scheme.</p>	<p>Conditions that will indicate purpose has been achieved: End of project status. 1. Trained staff locally available to train 280 graduates from Institute of Hygiene & preventative medicine 2. Sufficient local trainers available to train 50,000 health workers required to staff 8,700 basic health units.</p>	<p>1. Report by experts 2. Local staff conducting all training without outside assistance by 12/81.</p>	<p>Affecting purpose-to-goal link: 1. Staff when trained will be willing to work in rural areas. 2. Government will provide 80% of budget from 1981 onwards</p>
<p>Outputs: 1. Trained medical personnel in social and preventative medicine 2. Trained health workers including medical assistants, sanitary inspectors, health visitors, and midwives.</p>	<p>Magnitude of Outputs necessary and sufficient to achieve purpose. 1. 250 graduates per year 2. As many as possible given existing constraints.</p>	<p>1. Records of the school 2. Confirmation by WHO and Government statistics.</p>	<p>Affecting output-to purpose link: 1. Incentives will exist for candidates to undertake training programs. 2.</p>
<p>Inputs: Activities and Types of Resources 1. Financing 2. equipment 3. Personnel 4. Scholarships</p>	<p>Level of Effort/Expenditure for each activity. 7 experts (x 5 yrs. at \$60,000) per annum = \$2,100,000 Overhead at 35% = \$735,000 Equipment = \$800,000 15% contingency = \$545,250 Total: \$4,180,250</p>	<p>1. Financial budgeting 2. Shipping documents 3. Signed contracts with experts 4. Reports from training Universities.</p>	<p>Affecting input-to-output link: 1. U.S. expertise and equipment available within time constraints 2. Suitable candidates available for training in sufficient numbers 3. Ministerial approval given for initiation of preventive medicine programs.</p>