BIBLIOGRAPHIC DATA SHEET

PN-AAJ-478

THE PROJECT CYCLE

PERSONAL AUTHORS - SEN, K. C.

CORPORATE AUTHORS - WIS. UNIV. REGIONAL PLANNING AND AREA DEVELOPMENT PROJECT

1981, 137P.
(STATE-OF-THE-ART PAPER NO. 1)

ARC NUMBER - 309.2.S474
CONTRACT NUMBER - AID/DSAN-C-0060
PROJECT NUMBERS - 9311135
SUBJECT CLASS - DA0000000000

DESCRIPTORS - PROJECT DESIGN, PROJECT ANALYSIS, PROJECT EVALUATION, PROJECT IMPLEMENTATION, DEVELOPMENT STRATEGY, PROJECT PLANNING, PROJECT IMPACT EVALUATION, PROJECT CONTROL

STATE-OF-THE-ART PAPER NO. 1

MAY 1981

THE PROJECT CYCLE

Keshav C. Sen

REGIONAL PLANNING AND AREA DEVELOPMENT PROJECT
INTERNATIONAL STUDIES AND PROGRAMS

STATE-OF-THE-ART PAPER NO. 1

MAY 1981

THE PROJECT CYCLE

Keshav C. Sen

Prepared under a contract for
the United States Agency for
International Development
No. AID/DSAN-C-0060

Regional Planning and Area Development Project
905 University Avenue, East Lobby
Madison, Wisconsin 53706
Telephone: 608/263-5242
Cable: OVERWIS
Telex: 265452

TABLE OF CONTENTS

PREFACE

The focus on public investment projects as vehicles of economic development in less developed countries (LDCs) has been increasingly sharpened by the criteria of economic efficiency and social and spatial equity in order to accomplish certain well-defined tasks. Projects are being designed to benefit specific target groups and areas, toward the attainment of certain socio-economic objectives of public policy. At the same time, the totality of the environment in which the development of projects takes place is characterized by complexity, diversity, uncertainty, a limited information base and even greed, vested interests, malevolence and violence.

Inasmuch as the interests of various parties involved in project development are not always compatible, there is a need to manage and resolve conflict from time to time and to institute to that effect mechanisms and processes, including political processes, where feasible. Second-best solutions, therefore, instead of being the exception, might quite often in reality be the norm. Such solutions, by the same token, might be the only viable solutions.

The project approach to economic development has itself been considered as too formalistic and rather narrowly conceived in bringing about an equitable distribution of the fruits of limited investible resources. And this is despite the fact that the concept of "project" has, more recently, undergone a metamorphosis, coming to embrace a wide variety of technical assistance and investment activities ranging from single-purpose infrastructure projects to multipurpose, intersectoral, regional, and social development projects. This is one reason why to try to present a project typology or, for that matter, to write a state-of-the-art paper, covering in one stroke all or major types of projects, in the public and private sectors, would be an unmanageable, if not an impossible, task. In view of the heterogeneities involved, from a practical standpoint, this would be as frustrating as it would be futile.

Yet, in tracing out the path of project development, one is but constrained to identify and deal with certain commonalities between types of projects in terms of the essential phases of their transition from project identification to project completion, to evaluation of project performance and impact. This is what the "project cycle" exercise is about. A state-of-the-art paper on a subject such as the "project cycle" might do no better than mirror the profile of uncertainty that shadows the entire life span of a project. Yet a state-of-the-art paper is not just a review paper, although it could not be written without a selective review of the literature. Neither is it a "manual" prescribing "guidelines" and "checklists." Manuals, checklists, and guidelines have entirely different orientations from that of a state-of-the-art paper. The former are essentially prescriptive, while the latter is essentially reflective. On the other hand, to be manageable, a state-of-the-art paper should be written around a certain theme rather than being an endless narrative of opposing views of which the subject might be captive. A state-of-the-art paper should develop a theme or themes and avoid getting lost in a jungle of details that are likely to obscure the basic issues and undermine the central message.

The principal theme of this state-of-the-art paper is that project development is a circular, rather than a linear, concept wherein project phases continuously interface back and forth. The complex reality in which project development takes place requires that the appraisal, implementation, and evaluation activities occur throughout the project cycle rather than only once in an arbitrary sequence.

The principal variation on the theme is that procedures and practices of those responsible for project development and evaluation ought to display

the characteristics that enable a project to attain the purposes that gave it its very reason to be. These characteristics include:

* A reduced approach to data
* A focus on activities necessary to assure project implementation, including institution building and budgeting
* Continuous monitoring and review of both the project activities and the environment in which they occur to assure timely response to opportunities
* Flexible, iterative, and less formal methodologies of project identification and selection, appraisal, and evaluation.

The orientation of this paper reflects the author's own background, experience, biases, and perceptions. That, perhaps, would be unavoidable, if not inevitable, in all attempts of this nature. In that spirit, while cognizant of the frailties of generalizations but also aware of the need for them, the following propositions are being set out right in the preface, to outline some of the important considerations in project planning and development:

* Project planning is central to the development process that relates in its entirety to the social, spatial, and economic landscape of a people, including other projects with which the project might be directly or indirectly linked.

* The process of project development will significantly influence the expected output of a project. Sound project design will facilitate the smooth implementation of projects.

* Well-balanced feasibility studies form the basis of sound project design and increase the probability of project success.

* It is during the implementation phase of project development that the best-laid plans of well-designed projects could go wrong. Continuous monitoring, therefore, becomes crucial to implementation of projects.

* Simple procedures and realistic schedules, particularly those underlying disbursement of funds and procurement of goods and services for implementing projects, will enhance the effectiveness of project monitoring as an instrument of control. They will also have the effect of minimizing avoidable tensions in project management.

* Availability of funds to finance the local currency component of a project's capital costs could present itself as a constraint on the progress of project implementation.

* Similarly, the availability of funds to finance the recurring costs of a project is crucial to the effective operation and maintenance of its facilities. Planning of recurring costs is as important as capital cost planning in preparing cost-estimates of projects.

* While the establishment of a project office is necessary in order to implement a project, the executing agency responsible for operating and maintaining a project is likely to be more effective if it functions, except in special cases, within the sectoral and spatial framework of existing bureaucratic and administrative structures.

* In view of the limited availability of skilled management personnel in less developed countries, particularly at the regional and local levels, selective standardization in project design and appropriate replication of projects would go a long way toward capitalizing on this vital manpower resource. In this regard, the role of pilot projects is well worth exploring in suitable areas of economic activity. This would have important implications for the design of training programs for the project planning and management staff in these countries.

* As a vehicle for reaching out to specific target groups to effect desired changes, the project approach to channeling development assistance would be circumscribed in its effectiveness by the policy environment within which projects must operate.

* There is no inherent merit in comprehensive approaches to project planning and development. By the same token, there is nothing inherently wrong with project planning and development carried out on the basis of limited information and reduced data.

An earlier draft of this paper was the subject of a workshop held at the University of Wisconsin-Madison (UW) under the auspices of the UW/USAID (U.S. Agency for International Development) Project on Regional Planning and Area Development (RPAD) where I was a Project Associate (May-1980-May 1981). I would like to express my special thanks for their comments to:

Dr. Colin Bruce (Economic Development Institute, World Bank);
Dr. Colin Rosser (Director, Development Planning Unit, U.K.), and
Prof. Louis Sabourin (President, Development Center, OECD).

I would also like to thank for their comments on other occasions:

Prof. André Sapir (Economics Department, University of Wisconsin)
Prof. Daniel Bromley (Department of Agricultural Economics, University of Wisconsin),
Dr. Ken Kornher and Dr. Norm Nicholson (Office of Rural Development and Development Administration, USAID), and
Dr. Morris Solomon (Coordinator, Development Project Management Center, U.S. Department of Agriculture).

In writing certain sections of this paper I have also drawn upon the work of Prof. Leo Jakobson (Co-Director, RPAD Project) in order to emphasize the relevance of selectivity--selective comprehensiveness--in planning, including project planning.

Also, I am grateful to Prof. Ved Prakash (Co-Director, RPAD Project) for his constant encouragement to me and for giving me the benefit of his views throughout the writing of this paper.

I also wish to thank Mari Segall and Deb Thyng Schmidt for their advice in editing this paper.

Finally, I must say that in writing this paper no claim to originality is being made, since hardly anything said in these pages has not been said before. But, then, certain things do need retelling. I think this is one of those things.

I. INTRODUCTION

A striking feature of practitioners' growing experience with development administration is their awareness of the inherent interdependence between the economic, financial, commercial, cultural, spatial, political, technological, managerial, and organizational factors that shape the course of events in reality. It is widely recognized and accepted that reality is characterized by states of disequilibrium and that change is movement from one state of disequilibrium to another. Policy makers and planners have been humbled in their ambition to provide lasting solutions to complex problems as theoretical constructs have been tested and found to be wanting. Constrained solutions to problems in terms of costs and

benefits, however defined, are, therefore, now considered acceptable.[1]

Concurrently, progressive attempts are being made to escape from conceptual straightjackets that are either too aggregated to be meaningful and too comprehensive to be operationalized, or too narrowly conceived and designed to be relevant. This skepticism of discipline-bound concepts and constructs has strengthened the urge to search for a more balanced, integrated, and interdisciplinary approach to understanding reality--insight by hindsight, perhaps, yet a step toward clearer perception. With structured anticipation, it is hoped that some bridges could be crossed before they are reached.

Thus, as recent literature on the subject amply bears out, economic development is no longer considered equivalent to simple economic growth in terms of GNP per capita. Rather, it now includes distributive and spatial dimensions in addition to the structural changes that are normally associated with a process of economic growth. Economic development itself, however it is defined or its content determined, is best regarded as only a vector in the matrix of nation building. For example, it is now generally believed that social equity, far from being construed as a drag on economic growth, is its necessary concomitant, and that economic growth without social equity would be undesirable, if not totally unacceptable and even self-defeating. Improvement in the quality of life would, similarly, necessitate structural changes of a certain order and magnitude that would have far-reaching implications for policy making and planning in order to satisfy basic human needs. Far from being the infallible arbiter of social and economic justice, the market mechanism, if allowed to proceed undaunted, could become a medium for perpetuating and aggravating dehumanizing inequities in time and space, among contemporaries and between generations, within nations and between them. Just as economic growth does not guarantee economic development, economic development per se does not guarantee social equity and justice.[2]

A project, then, is just a vehicle and a medium for bringing about a desired change in the economy and society. It has to be developed within a certain conceptual framework and then executed and operated in the context of market imperfections and biases and the distortions present in

---

1. United Nations, Administration of Development Programmes and Projects: Some Major Issues (New York, 1971); Administrative Aspects of Planning (New York, 1969).
Dennis Rondinelli and Aspry A. Palia, Project Planning and Implementation in Developing Countries (Honolulu: Technology and Development Institute, The East-West Center, 1976). This document provides an excellent annotated bibliography on development project management.

2. United Nations Educational, Scientific, and Cultural Organization (UNESCO), Report of a Unified Approach to Development (New York: United Nations, December 1974).

factor prices and product prices, including those introduced through the instruments of public policy--such as monetary, fiscal, trade, and exchange rate policies--all of which are responsible for creating a sub-optimal economic environment. But it must be noted that it is primarily through the medium of projects that development comes to terms with reality. It is in this sense that a project is a real thing. It is an organism. It lives. It pulsates, throbs, responds, reacts. It has its own conditionings, biases, sights, and insights--even its own vision. It gives concrete expression to policy goals, sectoral and spatial objectives, and programming exercises. It is the medium that also tends to be the message. The irony is that the ends of policy are not only multiple but often also lack mutual compatibility; the permissible instruments of policy are at the same time rather limited and tend to circumscribe the range of feasible options for practical action. There should be little surprise, therefore, if so often the message does not come out loud and clear.[3]

The term "project" itself is not applied uniformly from sector to sector. It has a large variety of usages and has, in fact, undergone a metamorphosis of sorts. The term is used to connote single-purpose, relatively straightforward, and well-defined physical infrastructure projects; multipurpose physical and social infrastructure projects; integrated rural development and area development projects; lines of credit established with national or regional development finance corporations; program lending--including lending for general, budgetary support, sector lending, research projects, and the like. The point to be noted is that the process of project development from one end of the spectrum to another is quite similar from one type of project to another. Of course, there are differences of nature, scope, and emphasis in time and space, of target groups and beneficiaries, of spillover effects and externalities, and of the likely pay-offs in terms of socio-economic and other returns. Nevertheless, these formal differences between projects do not, or should not, detract attention from their intrinsic similarities in substance. After all, sectoral differences can be artificially exaggerated and the management of the economy based on and conditioned by its division into sectors for the purpose of project development could prove to be wasteful. This formalistic categorization of projects into sectors should, therefore, be regarded at best as a recognition of the technological, managerial, and organizational features specific to each sector. Differences in project development arising from the source of funding, domestic or foreign, and those arising from the form of management, public or private, could, similarly, be overstated. The project life and the salient features of its transition from inception to maturity are still the same, from project to project, from sector to sector, from place to place, and from time to time.

---

3. Hartmut Schneider, National Objectives and Project Appraisal in Developing Countries (Paris: Organization for Economic Cooperation and Development [OECD], 1975).

An interesting phenomenon to note is that project implementation seldom proceeds on schedule; similarly, actual project costs are rarely contained within original estimates. It could be stated as a rule of thumb that projects take longer and cost more to complete than expected. It is also not uncommon to find a completed project looking different from its original conception. In addition to underscoring the significance of a flexible and adaptive approach to project management, this highlights the fact that the project path is strewn with essentially the same kind of pitfalls, regardless of the sector to which a project might belong. It is the same hurdle race for all.

Delays in project implementation, cost overruns, and project redesign, though interrelated aspects of project development, demonstrate that project life is on a continuum. Different sets of forces originating at different times tend to intersect and converge somewhere along the line, often reinforcing one another; they might appear as sequentially apart and functionally differentiated, but are interdependent nonetheless, continually interfacing with one another.[4]

Anticipation, then, lies at the heart of development administration. The ability to anticipate difficulties in project implementation provides the administrator not with a crystal ball to foretell the future, but with a built-in safety valve to minimize uncertainty and to avoid or contain unpleasant surprises within manageable limits. This requires a perspective, kaleidoscopic in nature, encompassing financial and physical planning, economic and spatial planning, familiarity with the art of management and administration, and, above all, an understanding of human nature. A development administrator must truly be an artist of the possible.[5]

The treatment accorded to the subject of project planning and management as presented in this paper takes as its reference the public investment type of project that would have received some technical and financial assistance from bilateral and multilateral aid agencies. This is because the paper is a stream-of-consciousness that draws upon the author's own personal experience of over a decade in this area, and he is aware of the presence of traps besetting the path of the practitioner in this field.

---

4. Albert O. Hirschmann, "Project Design, Trait-Taking and Trait-Making," Development Projects Observed, chap. 4 (Washington, D.C.: The Brookings Institution, 1967).

5. James G. Heaphey, ed., Spatial Dimensions of Development Administration (Durham, N.C.: Duke University Press, 1971).
Ramesh P. Shah, "Project Management: Cross Your Bridges Before You Come to Them," Management Review (December 1971) pp. 21-27.
Hans J. Thamhain and David L. Wilemon, "Conflict Management in Project Life Cycles," Sloan Management Review, vol. 16, no. 3 (Spring 1975) pp. 31-50.

In the pages that follow, a conceptual framework of the project cycle is presented, the various constituents of the cyclical flow identified, described, discussed, and analyzed, and their interrelationships established. At each step, theoretical strands and practical concerns are brought out, controversial issues dealt with, and in the context of the existing gaps between theory and practice, the likely directions of conceptual development and practical application indicated. The paper concludes on the note that the state-of-the-art of project development and management is in a state of transition and catharsis. We have come a long way in understanding the life-span of projects but there are still several areas of darkness that need to be explored; in doing this, we should continue to draw upon several disciplines, old and new, to innovate, improvise, and refine the art of project development and management so that projects will increasingly become an effective medium for attaining the stated objectives of public policy.

II. PROJECT CYCLE

The circular nature of project life has been viewed both as the functional interdependence of various phases of project development as they continually interact, and as a progressive build-up of the management function itself as it relates to the development of similar projects. This view of the project cycle is depicted in Figure 1.

It would be obvious from Figure 1 that project development is the focal point of various perspectives--national, regional, subregional, local: macro, sectoral, micro--and attempts to synthesize the functional, spatial, and institutional dimensions of analysis.

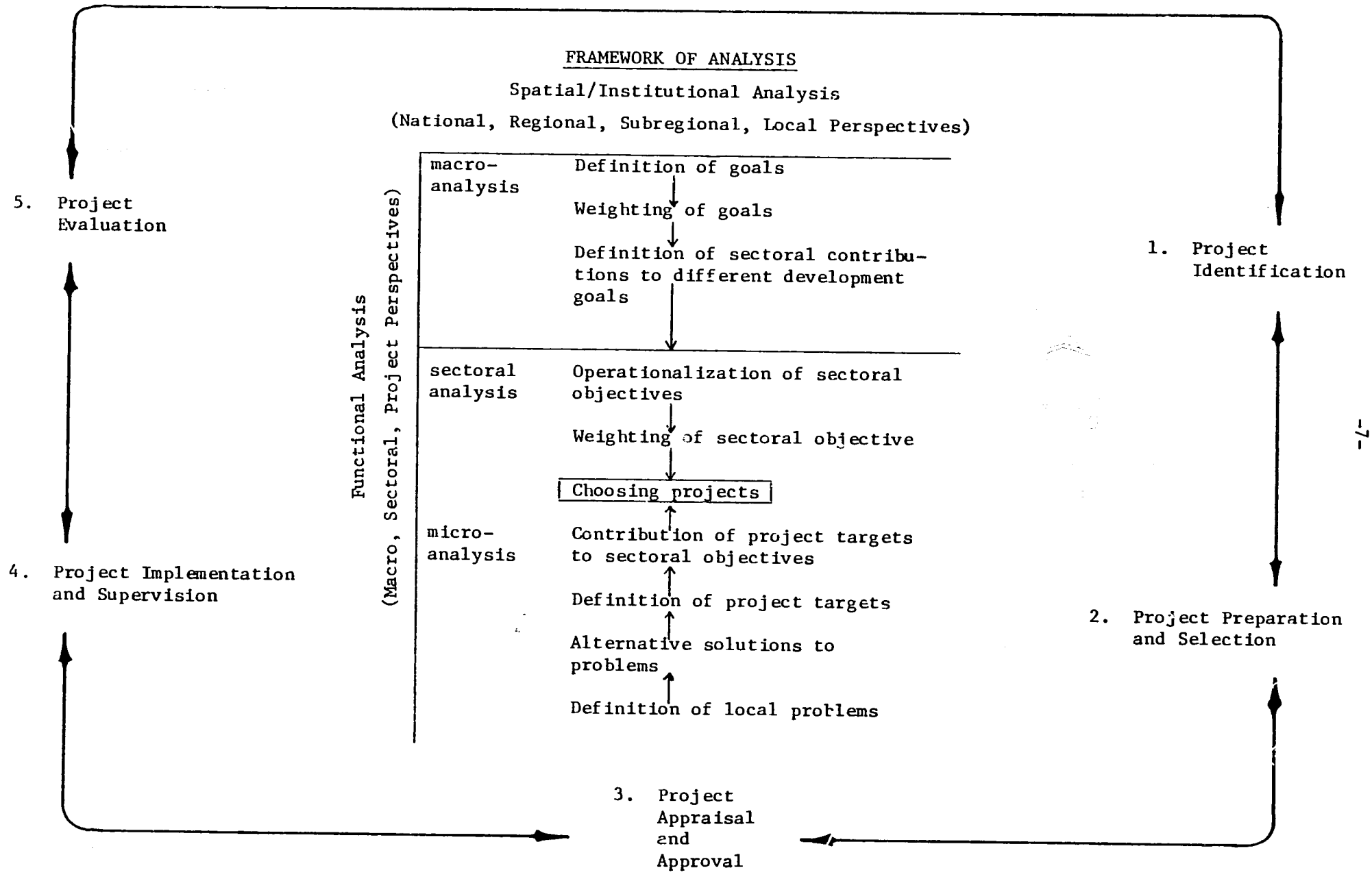


Figure 1. The Project Cycle
Functional, Spatial, and Institutional Dimensions of Development Projects

Furthermore, various phases of project development are not sequential in the sense of being mutually exclusive, since there is continuous reassessment, reiteration, and refinement of the entire process to increase project relevance.

Table 1 translates project activities into a multitrack, timeline scenario to underscore their interdependence and to show how planning, evaluation, and data collection activities interface simultaneously over time. The table depicts the strategy sequence in project development, showing the development activities that will occur in conjunction with each phase of the project cycle in order to maximize the probability of project completion and goal achievement.

The first column (track) shows the strategy sequence of project development, although it is important to note that this sequence is not mandatory and activities may be telescoped or bypassed altogether. The second track indicates the implementation activities, such as institution building and budgeting, essential to project completion. The third track shows the evaluation activities without which immediate response to the uncertain environment in which project development occurs would be impossible. The fourth track shows the data collection activities appropriate to each phase. This column underscores the point that data collection is a response to project needs and not an end in itself.

The theme underlying the project cycle is that different stages in the life of a project are interdependent and inextricably related. For example, the output of a planning exercise becomes an input to program planning, and program data provide the necessary information for a planning exercise. Plans need information on projects and projects need information from plans, just as project appraisal needs information from project evaluation and project evaluation requires good project appraisal. Accordingly, it would be useful to visualize the phases in the life cycle of a project in terms of links in a chain, and to think of project administration as an instrument for making these links of equal strength. Unless this is done, the weakest link will affect the performance of the whole project. Within this framework, project development becomes a management tool, not just for a particular project, but for the monitoring of social policy and decision making in general.[6]

The underlying theme also underscores the continuous interaction between the subjective and objective elements of decision making. This is an iterative process involving planning, allocation, budgeting, and implementation decisions, just as it highlights the importance and usefulness

---

6. Warren C. Baum, "The Project Cycle," Finance and Development (June 1970) pp. 2-13.
B. Chadenet and J.A. King, "What is 'A World Bank Project'?," Finance and Development (September 1972) pp. 2-12.
Morris J. Solomon, Elements of Project Management, Development Project Management Center, USAID, June 1979.

TABLE 1

THE PROJECT CYCLE--MULTI-TRACK TIMELINE

Track 1 STRATEGY SEQUENCE	Track 2 IMPLEMENTATION ACTIVITY	Track 3 EVALUATION ACTIVITY	Track 4 DATA COLLECTION ACTIVITY
1. PROJECT IDENTIFICATION	*Identify critical elements in project implementation *Build consensus among project administrators, donor agencies, beneficiaries	*Develop project monitoring and evaluation criteria using goals and objectives used in project identification as terms of reference	*Use reduced data in project identification (unless sectoral studies are already available or can be easily undertaken)
2. PROJECT PREPARATION AND SELECTION	*Analyze project feasibility study in terms of opportunities for project implementation	*Assess likely project impact in terms of criteria reflected in feasibility study	*Undertake feasibility study to cover: appropriate technology, economic/commercial/financial/legal/organizational/managerial/cultural aspects *Collect baseline data as reference for ex-post evaluation
3. PROJECT APPRAISAL	*Incorporate methods into project design for project implementation	*Develop mechanisms and procedures for project monitoring *Develop ex-post evaluation system	*Determine further need for data collection
4. PROJECT IMPLEMENTATION AND SUPERVISION	*Respond to implementation problems, e.g., cost overruns, schedule lags, local recalcitrance, etc. *Proceed with training, institution-building, and other activities as necessary	*Review monitoring data	*Collect data for project monitoring and ex-post evaluation
5. EVALUATION	*Ascertain successes/failures in project implementation	*Prepare project completion report *Undertake ex-post evaluation *Perform social impact analysis	*Collect data for social impact analysis

of the art of development administration[7]--which transcends departmental and ministerial jurisdictions in order to develop, organize, and administer multipurpose, multifunctional development projects and programs designed to attain the stated objectives of public policy.[8]

The various phases of the project cycle should be viewed only as indicative and illustrative of a sequential flow of steps inherent in the development of a project. In practice, certain phases might be telescoped, others elongated, still others bypassed completely--depending on the reality with which one is dealing.

For example, an important phase in the project cycle is project selection. Ideally, whatever the criteria for project choice might be, a certain ranking of project proposals would be required prior to the final selection of a particular alternative, whether within a sector or between sectors, or between regions of the economy. In most LDCs, however, the decision point for each project is reached separately and independently of competing alternative proposals mainly because no such proposals exist.

Accordingly, in such cases, the rational-comprehensive process of the project cycle described above becomes not only unfeasible but could also posit an unnecessary obstacle to project planning and development. What is needed, instead, is a reduced approach to planning.

One such approach is the Sketch Planning method.[9] The sketch plan is a framework that, in broad quantitative and qualitative terms, presents an outline for the spatial and temporal organization--in the form of "project-complexes"--of settlements, economic activity, social services, and supporting infrastructure at the regional, subregional, and local levels. It is an iterative process of plan formulation which attempts to identify key sectors and projects through "morphological analysis"--a method that encourages new combinations of known concepts for aiding

---

7. "Development administration...is not only the administration of development...(but also) the development of administration. Development administration encompasses the innovations which strengthen the capacity of the bureaucracy to stimulate and facilitate development. For these purposes development administration needs its own supporting, institutions, chiefly in the form of training, research, and consulting agencies, but also in the form of an articulate and informed public expectation of good administrative behavior and performance." George F. Gant, Development Administration: Concepts, Goals, Methods (Madison, Wis.: University of Wisconsin Press, 1979) p. 25.

8. United Nations, Public Administration in the Second United Nations Development Decade (New York, 1971).

9. Leo Jakobson, "The Sketch Plan Concept: A Method for Programming Action," Regional Planning and Area Development Project, Madison, Wisconsin, January 1981.

the production of ideas. It utilizes selective data matrices and spatial analysis in order to focus attention on critical issues, strategies, gaps between ongoing activities, and latent opportunities. The approach avoids entanglement in the multiplicity of issues considered in a traditional comprehensive planning effort which might not be quite as relevant in LDCs.

III. PROJECT DEVELOPMENT

It is said that a cathedral is far more than the sum total of the blocks of stone which form it. It is geometry and architecture. The stones do not define the cathedral; it is the cathedral which gives the stones their meaning, and the great variety of stones find unity in and through the cathedral.

A project, like a cathedral, provides focus for the related disciplines that are brought to bear on its development, and transcends them all and becomes an expression of their collective endeavor. In every project, a different mix of these disciplines goes to shape a certain angle of the project profile, interfacing with others like the colors of a rainbow. The identification and selection of a project, its preparation and design, appraisal, execution, monitoring, control, operation, and

maintenance are all aspects of the same phenomenon: the project cycle. Through its cycle, a project continuously refines itself in search of a true definition through continuous evaluation of its performance, alternating between feedbacks and "feedforwards."

The development of a project--whether its identification, selection, preparation, or appraisal--must always be done within the framework of a social development function, comprising multiple though sometimes incompatible ends, and a limited number of policy instruments. The project itself, however, being a more or less discreet activity, becomes a vehicle to attain directly a certain purpose. To this extent, project development supplements and complements other policy instruments in the realization of development goals. It is imperative, therefore, that project identification and selection be done systematically, with a clear understanding of development goals and policy objectives and an articulated sense of purpose.[10]

A. PROJECT IDENTIFICATION

The availability of sector studies is of help in identifying projects; allocation of investable resources could then be made in favor of those projects that are likely to maximize the backward and forward linkages, given the structural characteristics of the economy. Sector studies, however, are not always available, particularly in LDCs. Projects must then be identified through less formalized channels of investigation, such as field reconnaissance, review of available studies, and analysis of available data pertinent to satisfying a felt need. In any event, one does not need a sledgehammer to kill a fly; therefore, availability of sector studies should not be regarded as a prerequisite to the identification of projects.

Even when sector studies are available, the structural characteristics of the economy might be undergoing a fundamental change such that the marginal approach to economic development is no longer relevant. The constraints and opportunities might be in the process of readjustment. Furthermore, there is hardly a consensus among theoreticians and model builders on economic growth theories best suited to LDCs. Less

---

10. Yusuf J. Ahmad, "Project Identification, Analysis and Preparation in Developing Countries: A Discursive Commentary," Development and Change (July 1975) pp. 83-89.
Dennis Rondinelli, "Project Identification in Economic Development," Journal of World Trade Law, vol. 10, no. 3 (1976) pp. 215-251; idem, "International Requirements for Project Preparation: Aids or Obstacles to Development Planning?," Journal of the American Institute of Planners, vol. 42, no. 3 (July 1976).

developed countries are marked by heterogeneity, although attempts have been made recently to classify them by stages of economic growth with typical characteristics empirically ascertained.[11] But the point to be noted is that we live in a world in which economic nationalism has challenged the international economic order based on historical comparative costs, and when the requirement to meet basic human needs and redress imbalances within countries is taking precedence over aggregative growth indices.[12]

Short of full-blown sector studies, the identification of projects should proceed, therefore, within a general framework of sectoral and spatial analysis. This would ensure that even if the best possible projects could not be identified, those that had been identified were the best projects possible under the circumstances and not simply shopping lists for exhausting certain budgetary allocations. This is important because, once identified (and more so when selected and prepared), a project tends to gather its own momentum, particularly when there are only a limited number of projects identified to achieve a certain sectoral spread. In the hard reality of LDCs, it is quite common to run into situations where there is a dearth of so-called "bankable" projects. Capacities of these countries to absorb aid are quite often limited while their needs certainly are not. In fact, it is necessary to provide technical assistance to such countries to build up their capacity to identify and prepare sound projects, including those that are bankable.

Finally, it is important to pay due attention to the issue of who gets to identify projects, since the definition of a problem will depend upon who is asked.

---

11. Hollis Chenery, Structural Change and Development Policy (London: Oxford University Press, 1979); Chenery and M. Syrquin, Patterns of Development, 1950-70 (London: Oxford University Press, 1975).

12. Chenery, et al., Redistribution with Growth (London: Oxford University Press, 1974); idem, "Comparative Advantage and Development Policy," American Economic Review (March 1961) pp. 18-51.
Hernan Santa Cruz, "The Three Tiers of 'Basic Needs' for Rural Development," Finance and Development (June 1979) pp. 29-31.

Dudley Seers, "The Meaning of Development," The Agricultural Development Council, Inc., Reprint (New York, September 1970).

G.D. McColl and C.D. Throsby, "Multiple Objective Benefit-Cost Analysis and Regional Development," Economic Record, vol. 48, no. 122 (June 1972) pp. 201-219.

Keshav C. Sen, "Nation Building and Regional Integration," Research Paper no. 8, mimeographed (Madison, Wis.: USAID-University of Wisconsin Research Project on Economic Interdependence in Southeast Asia, 1966).
See also Appendices A and B on Basic Needs.

B. BANKABILITY AND PROJECT SELECTION

Broad considerations that determine the so-called "bankability" of a project might be stated as follows:

(1) The nature of the project; i.e., whether it is a revenue-earning project, a non-revenue-earning project, or a project which is only partially self-financing.

(2) Whether the executing agency of the project is an autonomous entity, having its own budget and policy-making authority, or a line agency of the government, such as a department of division.

(3) The bankability criteria used by the funding source.

Generally speaking, if a project is revenue-earning and is managed by an autonomous entity, its bankability rating is increased. But the overriding consideration in determining a project's bankability would seem to be (3) above, viz., the bankability criteria used by the donor source.

Accordingly, the following generalizations about the criteria for bankability could be made:

(1) Whether a project is revenue-earning or not, it should be an instrument for attaining a certain objective of public policy. Accordingly, it should be economically viable. Whether it has an acceptable economic internal rate of return (EIRR) depends on the nature of benefits resulting from the project outputs, i.e., whether such benefits could be measured quantitatively or simply described qualitatively.

(2) A revenue-earning project should be financially viable; i.e., its FIRR should be within acceptable limits throughout the economic life of the project.

(3) In the case of a non-revenue-earning project, or a project that is only partially self-financing, there should be a clear indication of the financial arrangements governing the operation and maintenance of project facilities.

(4) The management and organizational structure of the executing agency should be acceptable; in particular, the key staff should have appropriate qualifications and experience.

It should be noted, however, that criteria for bankability disclose nothing about how projects are selected. The criteria governing project selection tend to be far more complex than those for determining their bankability. Two of the reasons for this are:

(1) Project choice assumes the availability of alternative projects from which to choose, both within sectors and between sectors.

(2) Assuming that alternative projects are available, it is necessary to rank them. Ranking requires sufficient information on the basic elements of the country's social welfare function and objectives of public policy. These objectives could include: satisfying basic human needs; employment generation/underemployment reduction; maximizing economic growth potential with price stability; balanced regional development; balance of payments; broadening the national economic base through import substitution, export diversification, or industrialization in general; ecological balance; and so on. Not all of these objectives are mutually exclusive, but neither are they necessarily compatible. Inevitably, however, they would leave their imprint on project choice, design, and location.

Criteria for project selection, therefore, could be briefly stated as follows:

(1) Consistency, as much as possible, with national goals, sectoral considerations, regional characteristics and aspirations, and local needs.[13]

(2) Cost effectiveness and an "acceptable" net present value/benefit-cost ratio/economic internal rate of return (which might not pass the bankability test) in the context of social equity.

Thus stated, it is obvious that considerable room exists for a trade-off between several of the parameters that govern these criteria, and that the final decision would necessarily be guided by practical expediency.[14] To the extent that projects tend to change the status quo of the relative endowments, rights, and privileges of social and economic groups, they could be considered to be at once threats and opportunities. Bankability, under such circumstances, to the extent that it is relevant within the framework of project development, really becomes a non-issue if basic perceptions are themselves convoluted and distorted. See Appendix D for the criteria for selecting among alternatives used by the United States Agency for Institutional Development (USAID).

---

13. Andreas G. Papandreous and Uri Zouar, The Impact Approach to Project Selection, vol. II (New York: Praeger Publishers, 1974). For a thorough and up-to-date discussion of alternative social rankings, see A.D. Sen, Collective Choices and Social Welfare (San Francisco: Holden-Day, 1970). See also Appendix C on Social Impact Analysis.

14. The following findings on project selection, based on case studies in Kenya, Tanzania, and Zambia, can be considered as representative in regard to project selection in most LDCs: (1) research for alternative programs was found to be limited; (2) only one design for each project

C. PROJECT PREPARATION AND DESIGN

The stage at which the potential benefit of a project could be maximized (or the harm it could do minimized) is the feasibility analysis and project design.[15] The quality of the feasibility study determines the quality of project appraisal. A well prepared and designed project sets the pace for what follows. It is at this stage, when the terms of reference of a feasibility study are being written, that various concerns of policy can be operationalized and built into project design. Granted that some redesigning is needed during project implementation as required by the exigencies arising from time to time, such adaptive modifications of the base design would only have a marginal impact on the project itself, since its basic course has already been chartered at the project feasibility stage. At that stage, particularly for infrastructure projects, the choice of the technological solution has already been made. The die at that stage has been cast; the mold has been cut.

Accordingly, the terms of reference of a feasibility study should clearly state the public policy objectives that the project is being promoted to attain, the nature of the technological solutions considered cost effective and appropriate, the relevance and appropriateness of the management and institutional arrangements to indigenous requirements, the use of local resources, and the target groups and beneficiaries. Since project performance and project impact would eventually be subjected to some form of ex post valuation, clear indications should also be given in the terms of reference of the type of baseline data that would be needed for this purpose.

---

was formulated and pursued throughout the preparation process; (3) only one project--in Kenya--underwent changes in basic characteristics due to the calculation of profitability; and (4) projects passed the decision points one by one and were considered on their own merits without any comparison involving ranking with other projects. Source: Lars-Erik Bir-gegard, The Project Selection Process in Kenya, Zambia, Tanzania (Stockholm: The Economic Research Institute, Stockholm School of Economics, 1975).

15. John E. Walsh, Jr., Preparing Feasibility Studies in Asia (Tokyo: Asian Productivity Organization, 1971).

IV. PROJECT APPRAISAL

The phase of the project cycle that has received most attention is project appraisal. There is a whole array of sophisticated concepts and measurement techniques available in treatises, manuals, monographs, guidelines, "guidelines to guidelines," checklists, and so on, brought out by national and international aid agencies and research organizations.[16] At the center of these methodological refinements lies the economic appraisal of projects, while the core of economic appraisal

---

16. United Nations Industrial Development Organization (UNIDO), Guidelines for Project Evaluation (New York, 1972).
I.M.D. Little and J.A. Mirrlees, Project Appraisal and Planning for Developing Countries (London: Heinemann Educational Books, 1974).

has been concerned with the concept of economic efficiency vis à vis social equity and the treatment of externalities and project linkages. Despite the baffling diversity of these methodologies and their conceptual sophistication and refinement, their application to practical situations has been described as "necessarily rather crude: and even "arbitrary."[17] At the same time, it has been recognized that since all these procedures start from the same theoretical foundations, they would be identical if equivalent assumptions were made about the economic environment.[18]

But, surely, there is more to project appraisal than the appraisal of the economic dimension. The technical, financial, commercial, management and organizational, legal, cultural, and spatial dimensions are equally crucial to project life and should receive all the attention they deserve in the appraisal of projects.

All the splendor of project appraisal notwithstanding, it must be said that it cannot go far beyond the feasibility study on which it is based and whose refinement it really is; a feasibility study well done virtually assures a tight appraisal. But even more important, a feasibility study, through a judicious assessment of alternatives, and through the selection of the optimal alternative, helps in defining the project and in preparing the project in terms of its basic parameters, covering all the dimensions indicated above. The appraisal process sharpens the project definition and establishes the ground for effective execution of the project by streamlining its critical path. A good project appraisal, thus, facilitates project implementation in terms of economy and efficiency. It provides an organic link between country programming, sector analysis, project identification, selection, and preparation on the one hand, and project execution and operation on the other.

Finally, the appraisal process takes diverse forms and varying lengths of time, depending on the mix of disciplines that must be brought to bear on appraising a project due to the project concept being employed. Is the project really a program like a sector loan, general budgetary assistance, a line of credit? Is it a single-peaked, straightforward, physical infrastructure project like farm-to-market roads, a coastal port, or a small-scale potable water supply system? A multipurpose river development project? An industrial project like a steel mill, a petrochemical complex, or a textile mill? A multipurpose project covering several sectors, such as an integrated area development project?

Lynn Squire and H.V. Van der Tak, Economic Analysis of Projects (Baltimore: The Johns Hopkins University Press, 1975).
Overseas Development Administration, A Guide to Project Appraisal in Developing Countries (London, 1972).
International Bank for Reconstruction and Development (IBRD), A Guide to the Guidelines: The UNIDO Method, mimeographed (November, 1973).

17. Squire and Van der Tak, Economic Analysis of Projects, pp. 7, 9.

18. Deepak Lal, Methods of Project Analysis: A Review (Baltimore: The Johns Hopkins University Press, 1974) pp. xiii-xviii.

Or a slum redevelopment, urban renewal, low/middle income urban/rural housing, vocational training, child nutrition, population or environmental control, new township development, or an "outreach" extension project?

A. TECHNICAL ASPECTS

In designing projects, subject to the binding technological constraints of certain engineering processes required for certain kinds of projects, opportunities do exist for capital-labor substitution in varying degrees.[19] Opportunities also exist for a trade-off between capital costs and maintenance and operating (M&O) costs. So viewed, the engineering problem and the economic problem blend into each other and become two sides of the same coin, since together they must insure economy and efficiency in identifying a cost-efficient solution. This is the domain of the engineering economy.

Given the stated objectives of public policy, and subject to the binding constraints of technology, engineering solutions should be most appropriate to the reality of a situation--duly taking into account the resource endowments; feasible factor substitution possibilities; potential trade-offs between capital and recurring costs; and the implications of these for institutional, management, and manpower requirements.[20] Since, among the objectives of public policy, those generally considered as more strategic than others are employment generation, exploitation of natural resources in the region or the economy, price stability, and minimization of the strain or maximization of the positive impact on the balance of payments, engineering solutions in particular and project design in general should tend to be compatible with these objectives. Technological planning, economic planning, and spatial planning should all be integrated to insure mutual consistency. There are no universally applicable technologies; they must be appropriate and adaptable to local conditions, problems, and needs. Among the basic criteria of an appropriate technology are:

(1) That it should be suitable in terms of:

Capital Expenditure per Head--technology should be consonant with what a country can afford.

Labor Productivity--technologies transferred to a developing country should be modified so that the productivity of labor does not exacerbate differences between modern and traditional sectors.

---

19. For some examples of capital-labor substitution in civil construction and in capital-intensive industries such as paper, cement, and fertilizers, see: The World Bank, Appropriate Technology in World Bank Activities, mimeographed (July 1976). See Appendix E.

20. See Appendices E and F on Appropriate Technology.

Scale--technologies must be adapted so that the scale of projection does not oversaturate a small domestic market, and inhibit entrepreneurial activity.

Skill Requirements--technologies of industrialized countries have emerged against a background of rising supplies of skilled labor which are rare in developing countries; appropriate technologies should not lead to high skill differentials.

Input Requirements--appropriate technologies should use domestic materials.

Products--products must be locally useful, relatively cheap, durable, and versatile, and should not cater exclusively to the wealthy. Developing countries need "appropriate projects," those designed to meet the needs and income levels of people within rural regions of developing nations, as much as they need appropriate technologies.

(2) A balance should be struck between traditional and modern technologies, each having its appropriate functions in urban and rural areas of developing countries.

(3) An appropriate technology should be flexible and adjustable to changes in conditions, needs, resources, skills and demand for new products over time.[21]

Furthermore, appropriate technology, if it is to succeed, must not only be competitive today--economically, technically and culturally--with existing technologies; it must also have what might be called an "evolutionary capacity." The problem is not merely to develop technologies to meet an immediate need, but also to build up an innovative capacity or innovation system.[22]

It should also be noted that, while technological decisions in a developing economy should be coherent and compatible with a particular set of goals, such coherence and compatibility is never fully achieved, just

---

21. F. Stewart, "Technology and Employment in LDCs," in E.O. Edwards (ed.) Employment in Developing Nations (New York: Columbia University Press, 1974), pp. 83-132. Quoted in Dennis Rondinelli and Kenneth Ruddle, Urban Functions in Rural Development: An Analysis of Integrated Spatial Development Policy (Washington, D.C.: USAID, 1976) pp. 135-136.

22. Nicholas Jequier, ed., Appropriate Technology: Problems and Promises (Paris: OECD, 1976). Quoted in Asian Development Bank, Appropriate Technology and Its Application in the Activities of the ADB, Occasional Paper no. 7 (April 1977).

as it is not achieved in the developed countries. Rather, economic policy decisions in the developing economies reflect sets of influences that, to some extent, act at cross-purposes. A major task of development policy is to reduce the frustration and inefficiency associated with inconsistent goals and methods, but this task is never fully accomplished. It is especially difficult to achieve when the choice concerns appropriate technologies, because the knowledge, interests, and operating methods of the different decision makers and sources of influence are often at variance.[23]

At the project level, this calls for an adaptive approach to technological solutions, project design, project selection and, indeed, project identification itself, assimilating the considerations mentioned above. More recently, appropriate technological solutions, design standards, and specifications are increasingly being brought to bear on the projects financed by the bilateral and multilateral aid agencies, and examples abound of successful attempts at appropriate project design in several projects covering different sectors.[24] Moreover, the aid policies in general have been restructured and reoriented to anticipate these concerns in the project cycle. Leading examples of these deliberate shifts in recent international aid policy are: the financing by aid agencies of the local currency cost component of projects, foreign exchange costs of capital investment, and recurring costs; encouraging the engagement of local consultants to prepare the project and to supervise its execution; and preferential treatment accorded to domestic procurement of goods.[25] The search for appropriate technological solutions continues and an increasing number of conferences and related publications have focused on the nature and scope as well as limitations of appropriate technology.[26]

B. ECONOMIC ASPECTS

Just as the engineering aspects are inextricably related to the economic aspects, the latter are inseparably intertwined with the social and spatial aspects of project appraisal. As a result, the methodology of economic appraisal of projects has been experiencing bouts of convulsion

---

23. Richard S. Eckaus, ed. Appropriate Technologies for Developing Countries (Washington, D.C., 1977) p. 13.

24. See Appendix E for some examples.

25. See Appendices G and H on Recurring Costs.

26. See, for example, Jequier, Appropriate Technology: Problems and Promises, Richard S. Eckaus, op. cit.; idem, Methodological Guidelines for Social Assessment of Technology (Paris: OECD, 1975).

simultaneously with our growing awareness and understanding of the complexities of the economic development process and social and cultural change.[27] The growing concern regarding the income distribution aspects of economic growth--though spatial distribution is only a very recent concern--and for social equity in general has tended to force economic analyses to demonstrate greater adaptability. Economic analysis has shifted from a neutral, value-free framework of "efficiency" criteria--such as "shadow pricing" of capital and labor to reflect their true, economic costs--to the value-laden universe of social pricing, characterized by assigning distributional weights to costs borne by and benefits accruing to different segments of the economy and society.[28] The recent concern with "absolute poverty," "basic human needs," and regional and area development has brought the "social impact analysis" approach to the forefront. Social impact analysis is an expression used for multiple-objective benefit-cost analysis of projects and programs, since a singular measure of economic viability--such as the benefit-cost ratio, net present value, or the internal rate of return--is considered too aggregative to be able to indicate the nature and extent of the real spread of project benefits in terms of achieving specific objectives.[29]

C. FINANCIAL ASPECTS

Practices employed in the financial appraisal of projects are more standardized than those of economic appraisal. While the economic viability of a project is invariably insisted upon, financial viability is not; the reason being that the project output might satisfy a public or a merit want, even if the project must then be subsidized. In certain cases, it might be considered prudent to build up financial viability only gradually so that the users are charged higher rates over time to generate an acceptable financial internal rate of return on the project. Very often this is the profile of the financial appraisal of the revenue-earning development projects.

On the other hand, the financial appraisal of the project entities--for example, public utilities--that are responsible for operating and maintaining project facilities is quite rigorous. In addition to balance sheet, income statement, and cash flow analyses of these entities, the financial appraisal also includes the computation of the rate of return on their average net fixed assets, self-financing ratios, and debt-equity ratios. It is generally believed that so long as the entity concerned can be judged financially sound, the impact of a financially unviable project on the operations of this entity will not be significant unless, of course, the project is disproportionately large in the

---

27. See Appendix I on General Principles of Project Appraisal.

28. See Appendix J for details.

29. McColl and Throsby, "Multiple Objective Benefit-Cost Analysis"; Papandreous and Zouar, The Impact Approach, op. cit.

See also Appendix C.

overall operations of the entity or is the only one it is operating. In such cases, meeting the financial soundness criteria obviously could not be insisted upon and the entity would need to be supported through budgetary transfers or other means. Knowing the extent of financial subsidy that a particular project or program is receiving tends to promote financial discipline, even if full cost recovery is neither possible nor desirable.

The point should be made at this stage that if costs and benefits were not shadow-priced or weighted, and if standard adjustments for transfer payments were not made, the project's financial internal rate of return could well be taken as a proxy for the economic internal rate of return; in fact, the two would be identical except for the presence of externalities and spill-over effects. The difference between the financial and economic appraisal of a project or program could, therefore, be summarized as arising from adjustments required for transfer payments, shadow pricing, the weighting of costs and benefits, and the presence of externalities.

The practices of international aid agencies regarding the economic and financial appraisal of projects in terms of cut-off points for economic and financial viability vary considerably from project to project. This is not only understandable but inevitable, with development projects covering a wide variety of sectors, regions, and target groups and trying to meet a diversity of policy objectives. Therefore, so long as a feasible technological solution is appropriate to the situation and is cost effective, it receives sympathetic treatment by donor agencies. Much greater emphasis is placed, on the other hand, on the institutional, organizational, and management aspects of project appraisal.

D. COMMERCIAL ASPECTS

All revenue-earning projects are subjected to commercial appraisal. This includes an evaluation of the market demand for the output of the project; the adequacy of marketing channels; and the supply of raw materials, labor, and other resources required for the project. The procurement procedures, such as competitive bidding or shopping on a national or international basis, are usually considered suitable for getting the best value for expenditures incurred. Projects financed by international aid agencies, like those receiving untied aid from bilateral aid agencies, almost always follow such procedures.

The valuation of the output of the project, on the other hand, particularly when it is an import-substituting project, is done on the basis of the net-domestic-value-added at international prices. This is to avoid the situation where the project's profitability might be high although its net-domestic-value-added is either negligible or even negative. Such cases can arise due to the high effective protection, tariff and non-tariff, granted to an industry in the hope that someday it will realize its dynamic comparative advantage through economies of scale, external economies, or backward and forward linkages.

But arguments such as these ought to be employed judiciously, since the real resource cost to the economy for a unit of foreign exchange saved could be high indeed due to a gross misallocation of domestic resources.[30]

Hence, it is necessary to take an integrated view of the commercial, financial, and economic aspects of a project in order to assess its overall viability.

E. MANAGEMENT AND ORGANIZATIONAL ASPECTS

The issue central to the appraisal of the management and organizational aspects relates to the organizational framework considered most appropriate for project implementation and project operation.

It is believed by some that unless the management and operation of a project is entrusted to an autonomous or semiautonomous entity, the administrative constraints of the specific governmental department will tend to apply to the project as well. As a result, in many cases, entities having their own budgeting, personnel, and operational procedures are established to manage and operate projects financed by international aid agencies, sometimes with the help of expatriate consultants, in the hope that the experience gained will be eventually internalized by the specified governmental departments. In other cases, the departmental divisions are entrusted with this responsibility. A decision to this effect must be made carefully on a case-by-case basis, since some proclivity does exist toward justifying the creation of such entities, even in those instances where a good case could well have been made for doing just the opposite.[31]

Whatever organizational form the management function might take--divisional, autonomous, or semiautonomous--it is imperative that a project manager be appointed with all the necessary personnel and logistical support to direct the course of project implementation with minimum delays and in an integrated fashion. Indeed, this has now become a standard practice for projects receiving financial assistance from multilateral and bilateral aid agencies.

---

30. The literature of the economics of import substitution as a strategy of economic growth is very extensive and the limitations of this strategy are now well recognized. Activities that are in the nature of export substitution would also need to be subjected to extensive commercial appraisal. See, for example, Keshav C. Sen, "Foreign Exchange Constraints and Import Substitution," dissertation (Ann Arbor: University Microfilms, 1967).

31. Uma Lele, The Design of Rural Development: Lessons from Africa (Baltimore: The Johns Hopkins University Press, 1975).

The significance of the appraisal of the management aspects could hardly be overstated. While the replication of projects, with or without some degree of scaling up or down, may be hard to accomplish, those who will be called upon to undertake this task are even harder to find. Only in the blazing hot furnace of daily project implementation and management through continuous adaptation and improvisation, are these skills, so valuable and so rare, developed. It is the chief duty of the management and organizational appraisal to help establish a framework within which decision making can be institutionalized, not just for the benefit of the project at hand but, more importantly, for the sector and the economy, so that those who need to can draw on this reservoir of accumulated experience. The range and complexity of this function, and its importance in determining the success or failure of a project, will be dealt with further in the following chapter on project supervision. At this point it may be noted that in assessing the administrative capability of an organization it is important to look at several different elements. These include leadership, commitment, structure, resources, outside administrative environment, and grass-roots managerial considerations. See Appendix K on guidelines for managerial/administrative analysis of projects used by USAID.

F. LEGAL ASPECTS

The appraisal of the legal aspects of public projects receiving external assistance, particularly from multilateral aid agencies, can be very extensive and very complex. Through the legal covenants, both general and specific, embodied in the loan agreements, the legal appraisal reaches out to everything vital about the project, its hardware and software components. These components include the recruitment of consultants, procurement of goods and services, financial performance, budget and audit, pricing policy, project management and organization, disbursement of funds, insurance of project facilities, debt management, amortization, progress reporting, record keeping and data collection for post-evaluation of the project, and all the rest that comes within the scope of the project to facilitate its implementation and operation, including the obligations of ministries, departments, and agencies of the government and other public bodies.

Ironically, however, although some of the specific covenants holding the government or the project authorities responsible for certain actions are considered to be in the project's best interest, they can turn out to be quite unrealistic in practice, causing, besides embarrassment, delays in project development and, perhaps, in the development of the sector with which the project is concerned. Of course, there are escape clauses built into the framework of obligations--phrases such as "unless the Bank (or the donor) otherwise agrees"--but for various reasons, such adjustments are not always easily made, particularly when several donor agencies are involved in providing assistance to the project authority and it is similarly obligated to

all. Consequently, there are numerous cases of non-compliance with covenants, or of delayed or deferred compliance, which in certain respects nullify the purpose for which these covenants were originally designed.[32]

Take the financial covenant that is typical of public utility projects, such as electricity, water supply, and sewerage. The typical covenant stipulates that the price of the service will be set at a level that will be adequate to generate sufficient revenues to provide for a reasonable proportion, say one-third, of the utility's normal capital expansion programs for the future, after meeting the utility's operating and maintenance expenses and making adequate provisions for depreciation and debt amortization. Alternately, a certain rate of return on the average net fixed assets in operation, say ten or twelve percent, would need to be maintained, instead of the stipulation of a certain self-financing ratio as stated above.

Without going into the relative merits of these two alternatives to insure that the rates charged will adequately reflect costs and that the utility will finance normal capital expansion requirements, and to build up the utility's credit-worthiness in general--all laudable objectives--it has been observed that in many cases it has not been possible for the utility or the government to comply with this covenant. The reasons are as diverse as the users' inability to pay; e.g., the need to spur economic development and promote public health as a merit want, religious and cultural constraints, and, of course, political unfeasibility.

So, compliance is deferred or partial compliance is accepted, albeit reluctantly. But the typical covenant also stipulates that no additional debt will be incurred by the utility until its financial performance is considered satisfactory in terms of the self-financing ratio or the rate of return. The implications of this on meeting the sector's needs are only too obvious--consider the effects of huge backlogs of unsatisfied demand in the water supply and sanitation sector; or in the energy sector, where providing an adequate, economical, and steady supply of power could induce development in the less-developed regions of the economy.

Eventually, the services must be paid for by someone, since even merit wants are not free goods, and fiscal prudence would require that the users carry their own cross to avoid wasteful use of the product or service. The point is that the formality of the legal covenant might not always be consonant with the dictates of reality--which may have the last laugh.

G. CULTURAL ASPECTS

In designing projects, cultural factors must be treated as intrinsic variables endogenous to the process of economic development. One does

---

32. For further discussion on this point, see Chapter V.

not have to subscribe to a particular theory of social change or a variant of historical interpretation and the dialectics of progress to appreciate that affirmative public response is a necessary condition for the success of a collective endeavor affecting the lives of people. It is in this sense that, wherever feasible, participation by project beneficiaries in designing, implementing, and operating projects will ensure their acceptance of the project and their cooperation toward its success.[33] Also in this sense, it is important to simplify the project process so that the project cycle can be carried out by local government units rather than central governments only. To this end, the financial and personnel requirements and operating procedures of the project implementing agencies should be carefully laid out, reviewed, and revised to prevent project procedures from becoming obstacles to progress.

The significance of the contextual nature of project development is most vividly illustrated in the rural development projects, where it is usually not possible to draw a neat line between the design and implementation phases; in fact, implementation begins during the design stage.[34] Redesigning of such projects must inevitably be done on a continuing basis throughout the project cycle, contextually, incrementally, and patiently.

Appraisal of the cultural aspects of a project, thus, is guided by the need to be flexible, adaptable, and resilient to social response, and requires that the project profile, including the establishment of criteria for determining project success, be prepared within the framework of relevant social mapping.[35] Cultural appraisal of public investment projects is an illustration of a software component of the project cycle that lends a measure of strength to the hardware components. See Appendix M for the treatment of Social Soundness Analysis employed by USAID.

---

33. See Appendix L on Local Participation.

34. Glynn Cochrane speaks of organizational contextualism, ideological contextualism, and contextual technology. See The Cultural Appraisal of Development Projects (New York: Praeger Publishers, 1979) pp. 46-70.

35. Cochrane, The Cultural Appraisal of Development Projects, pp. 20-45. Cochrane speaks of the need for some degree of uniformity and predictability in evaluating the cultural dimensions of projects. The criteria for a national inventory of cultural resources that he mentions are: identification of groups, indigenous social organizations, belief systems, wealth forms, patterns of mobility, and access to basic human needs.

V. PROJECT IMPLEMENTATION AND SUPERVISION

The unfolding of reality is hardly structured and the ability to anticipate it has its limitations. With the best of project preparations and the most comprehensive of project appraisals, project implementation still has a dialectic of its own that can defy all the incisiveness of forecasts and contingency planning. Project supervision, thus, occupies a very important and by far the most trying phase of the project cycle, requiring patient handling of complex situations, empathy, and understanding. Getting a project off the ground, implemented, and operating--any project, but particularly massive public utility or infrastructure projects and other multipurpose development projects, including integrated area development projects--is indeed a very major task, calling for the collective and coordinated effort of all the parties involved in project development.

To illustrate, for projects that have received international aid, there are at least three principal parties to project supervision: the donor, the recipient, and the executing or the project implementing agency. There are others, like the consultants, contractors, and suppliers, but their roles are subsumed by those of the principal parties. The continuous interaction and the range of interdependence between these parties and the repercussions of one action on another are amazingly far reaching. These parties are jointly responsible for the success or failure of a project.

A. THE EXECUTING AGENCY

Once the conditions precedent to the effectiveness of a loan or grant have been met by the recipient government (which is the borrower and guarantor of the loan) and it has been declared effective, the primary responsibility of project supervision rests with the executing agency. Such conditions, where applicable, would vary from project to project, and could range from the establishment of a project office inclusive of the key staff and logistic support, to the acquisition of land or the right of way, to the passage of certain legislation.

Needless to say, delays encountered in taking these actions would tend to stall project implementation and could contribute to serious cost overruns, since project cost estimates prepared and finalized during the feasibility and appraisal stages would be thrown off balance far more than the contingency provisions contained in these estimates could possibly cover. In such cases, it would be imperative that the potential cost overrun be estimated, economic viability reassessed, and steps initiated to mobilize without delay the additional financing required to complete the project. The effort and time required to make such arrangements could be considerable.

The executing agency must then proceed to give form to the project concept, recruit consultants who will assist *inter alia* in preparing the detailed design of the project (since appraisal is generally done on the basis of preliminary project design prepared at the feasibility stage) and the revised cost estimates of the project; get tender documents drafted in conformity with standard requirements of the donor that would normally ask for international competitive bidding (or shopping, i.e., limited international bidding); evaluate the bids received; make contract awards; handle procurement; arrange disbursement of funds; supervise installation of equipment and the construction of project facilities to render it operational; and then, of course, operate and maintain the project.

Throughout this process, the executing agency must, of necessity, establish liaisons with pertinent government departments, other agencies, and, of course, the donor. The efficiency of the agency's operations is highly contingent on that of its partners in development. Weeks and

months may elapse before its requests are considered, or its recommendations reviewed or approved to recruit consultants, hire staff, make contract awards, get funds released, make appropriate changes in project design or project scope, get supplementary funds mobilized to meet cost overruns, revise rates and tariffs, and a host of other issues for which the approval or concurrence of the government and the donor are required. On top of this, it is alarming to think that the executing agency itself may be short staffed or staffed with personnel not quite up to the job, or not well motivated.

Additionally, the executing agency must comply with the donor's extensive reporting requirements; keep records; maintain accounts and get them audited, internally and from independent external or government auditors; collect specific data for subsequent evaluation of project performance or its impact; and be the focal point for consultants, contractors, and suppliers.

B. THE RECIPIENT

It would be idle to expect that without the full and active understanding and cooperation of the government, which is usually the borrower and always the guarantor, the executing agency of the project could ever perform its functions as scheduled. Problems endemic to project implementation are too diverse, multitudinous, and compelling to leave any room for the luxury of indulging bureaucratic procrastination, lack of will, administrative entanglements, and even dullness of vision. This makes project supervision difficult indeed.

The time taken by government departments to approve the recruitment of consultants or award contracts, make budgetary allocations for counterpart local currency funds and release these funds; make decisions on key staff appointments; and to make rate and tariff changes and institutional rearrangements can be so drawn out as to thwart any attempt at economy and efficiency by the executing agency.

In project after project financed by aid agencies, it appears that despite governments' commitments under legal documents, implementation has been delayed due to the unavailability of adequate local currency funds for the project. At times, this has been due to bad procedures; at times, simply bad planning. Not foreign exchange but local currency becomes, in such cases, the binding constraint on project development. In addition, the operating and maintenance costs of the executing agencies are sometimes hard to meet because of the government's refusal to consider favorably any increases in rates and tariffs sufficient to cover costs without making simultaneous arrangements for budgetary transfers or appropriate fiscal adjustments to rectify the situation.

Government departments tend to be overworked even when they are not necessarily understaffed. Simple decisions are delayed because nobody

knows who should decide, or because there are too many people who could decide. In the process, time is lost, costs escalate, frustrations grow, and the entire project scenario is muddled.

The situation is no better if the executing agency happens to be a division of a government department instead of an autonomous/semi-autonomous entity. In fact, it could be even worse.

C. THE DONOR

Governments and executing agencies set the pace for implementing projects; the donor agencies set their direction. Over the past three decades or so, there has been a gradual evolution in the aid agencies' understanding of the process of economic development and the meaning of development itself. From projects to programs to sector loans, from physical infrastructure to social services, from the economically efficient to the socially equitable, from contribution to GNP to the satisfaction of basic needs, from economic growth to public welfare, it has been a long, winding, and soul-searching effort. Concepts have been refined, new methodologies to assess project worth developed, new measurement techniques explored and fresh data requirements generated, and innovative instruments of development assistance policy employed to touch the core of poverty, to reach out to those who were left out, and to redirect investment and technical assistance efforts toward redressing imbalances between people and places. This effort is commendable and has been well received by the intended beneficiaries--but it is extremely limited in its impact and essentially experimental in nature. Consequently, the project cycle has been going through a transformation and might well go into a new orbit of identification, preparation, design, appraisal, implementation, monitoring and control, and evaluation. Inevitably, it has also given rise to new uncertainities, new challenges, and new opportunities.

At the same time, the international aid agencies have come under severe criticism. They have been charged, not without reason, with "promoting an imperious rationality that maintains dependence," and that their operating requirements have led to "voluminous documentation with irrelevant data," "window-dressing" through "overanalysis" of projects, and "premature data-bound paralysis" fostering "deceit." It is maintained that "the analytical requirements" of these agencies

> have become so complex that (their) application is beyond the administrative capabilities of most developing nations (and that of the aid agencies themselves), thus intensifying their dependence on foreign experts and consultants for project planning. Foreign standards and procedures are imposed on governments, often without sensitivity to local needs and constraints.

This promotes, ironically, an "inverse relationship" between the sophistication of detailed analysis and the changes of project success, and

a "distortion of national priorities." To remedy the situation, passionate appeals have been made for "creating indigenous capacity for project analysis," the "decentralization of project identification and preparation," and in this respect, the "establishment of special identification and preparation units" in these countries, and "combining project planning and implementation responsibilities." Only action on these lines, the critics maintain, will introduce "a sense of pragmatism and realism in the analysis and selection of project proposals," increase the chances of successful project implementation, and undo the "perversity" of the procedures of international agencies.[36]

The shift in the operating policies of aid agencies, therefore, might be regarded as an indication of their recognition of certain built-in biases in previous policies that could have been working against the interest of LDCs. Some of these biases may be enumerated as follows: the single project bias, the physical infrastructure bias, the bigness bias, the capital-intensity bias, the import-intensity/foreign-exchange bias, the expatriate consultant bias, the alien technology bias, the low-risk/financial-soundness bias, the rate-of-return bias, the legality bias, and so on. Not all these biases are mutually exclusive, but each focuses on a certain characteristic that permeates the project cycle from beginning to end, from project identification to project evaluation and project impact.

For instance, during the project implementation phase, delays could be systematically caused by excessive time taken for recruiting consultants; by cumbersome procurement and withdrawal procedures; the delivery of imported equipment and material and spare parts; and the aid agencies' review procedures in general, since their staffs, like the staffs of governments and the executing agencies, are relatively new to the business of development assistance and are getting on-the-job training.

It is interesting to note in this regard that:

> ...an analysis of experience with some 611 out of 713 IBRD-financed projects being supervised at the end of August 1973, shows that about 28 percent were meeting no difficulty; about 60 percent were experiencing "normal" difficulties (i.e., difficulties worth recording but not serious enough to cause concern about the successful completion of the project or the financial situation of the project entity); and the remaining 12 percent had serious problems in execution or operations which were demanding special attention and intensive supervision.[37]

---

36. For a most scathing criticism of the practices of international aid agencies, see Rondinelli, "International Requirements for Project Preparation," op. cit., from which this and preceding quotes were taken.

37. The World Bank, Project Supervision Handbook (June 1974) p. 6.

Similarly, based on its experience with project supervision over the past fifteen years or so, the Asian Development Bank (ADB) has classified projects as "normal," "cost overrun," "special attention," and "delayed." It is instructive to note that a "special attention" project has one or several of the following features:

(1) A substantial delay in overall project implementation has occurred which is endangering the attainment of the principal objectives of the project or has given rise to questions regarding the desirability of continuing with the project.

(2) Serious problems have arisen in connection with the ability or willingness of the borrower to comply with the Bank's guidelines or with any of its undertakings under the agreement.

(3) An actual or anticipated cost overrun on the project is of such magnitude (i.e., 30 percent or more of the loan amount) as to endanger the economic or financial viability of the project.

(4) Major technical problems have developed which, if not resolved early, would adversely affect the implementation or viability of the project.

(5) Financial constraints on the part of the borrower are such as to raise serious doubts about its ability to provide adequate funds to complete the project or to amortize the loan.

(6) Unusual or difficult problems or conditions (other than the above) exist which require the continuous close attention of Bank staff.[38]

Two major problems often encountered in the Bank's experience are "(i) change in the components or scope of the project, and (ii) foreign exchange cost overruns."[39]

Well-identified and well-prepared projects could certainly make project implementation and supervision more manageable. But the challenges of project management are just too many and too diverse for anybody to fully anticipate in order to provide built-in solutions in the design of projects.[40]

---

38. Asian Development Bank (ADB), Loan Administration Manual (Manila: ADB, August 1978) pp. 27-28.

39. Ibid., p. 29.

40. See Appendix N for Development Assistance Committee (DAC), The Guidelines for Improving Aid Implementation (November 1979).

The problem becomes no less intractable if the subject is basically an institution-building project instead of a public investment project. Take, for example, the case of creating a regional planning agency that will be responsible for bringing the regional focus to bear on national planning efforts to promote economic growth with social equity and spatial balance. The unintended fallout of such an attempt could be simply astounding. The line agencies of the government could regard this as a redundant, if not sinister, attempt at territorial infringement, in addition to being an act of functional and administrative impropriety. Far from being in a position to coordinate the activities of the concerned agencies in a manner to sharpen national awareness of regional/subregional and local needs or to redress historical preoccupation with aggregate, national indices of performance, the newly established regional agency could itself become an obstacle to resource transfer or even resource mobilization for regional projects and programs. The organizational nightmare could be further exacerbated by interdepartmental rivalries, interpersonal relations, communication bottlenecks, and of course, by differences in perceptions regarding the need for regional planning itself.

In addition, such a regional agency would have its housekeeping problems, difficulties of recruiting, retraining, and retaining the requisite staff, and of establishing its credibility with the social environment in which it must operate. The formulation of plans, identification of projects and programs, getting the community to participate in the decision-making process and insuring that those decisions will be implemented with a reasonable degree of success could each be a sterling test of determination, tolerance, and imaginativeness. Basic challenges will continue to arise in this process with or without the presence of expatriate involvement of one form or another. Such challenges and the need to appropriately respond to them lie at the core of the development process and are the basic elements constituting the art of development administration.

VI. PROJECT EVALUATION

Perhaps the most delicate of all tasks in the project cycle is evaluation; it may please none but will certainly offend some. It can be as frustrating as it can be rewarding. It is a continuous process, whether in terms of monitoring the physical and financial aspects of project implementation, or in terms of the ongoing evaluation of project progress to make management decisions dealing with emerging constraints and the changing spectrum of the project environment, or even in terms of ex-post evaluation of projects, including the assessment of project impact. And its effectiveness largely depends upon the quality, explicitness, and rigor of the project or program design and objectives. Vagueness of policy goals and program objectives and looseness of project design tend to be followed by inarticulate evaluation. As

Bacharach states, "Evaluation cannot make an experimental intervention out of a political compromise."[41] Teitz calls it an "uncertain guide."[42]

Evaluation begins when the terms of reference of a project feasibility study are written, if not earlier, since the identification of projects is itself done within the framework of certain objectives. The collection, collation, and analysis of the baseline data are undertaken at the feasibility stage and later become the reference point for comparison of the effects and impact of a project or program.

The project appraisal further extends this process by specifying the reporting requirements during project implementation and upon its completion. Project monitoring and control, thus, become the rudder that directs the project course and, in fact, the most vital and valuable intrument of built-in evaluation from day to day.

The frequency of progress reports, just as their content and form, necessarily varies with the type of project and the purpose for which such reports are designed. Broadly speaking, however, progress reports may be required of the executing agency once every quarter. Accordingly, the agency's record-keeping and data management practices should be such that adequate information could be generated under the following categories, viz.:

-Various steps from detailed design of the project through contract award to physical construction of project facilities

-Revised cost estimates and implementation schedules of the project

-Expenditures incurred including disbursements of loan proceeds

-Management and operations of the executing agency

-Financial performance and prospects of the executing agency

-Compliance with loan covenants, and so on.[43]

Each of the elements referred to above could be disaggregated and specified in varying detail as required. Similarly, the monitoring of the overall

---

41. Peter Bacharach, Evaluating Development Programs: A Synthesis of Recent Experience, Occasional Paper no. 3, mimeographed (Paris: OECD Development Centre, 1977) p. 35.

42. Michael B. Teitz, Policy Evaluation: The Uncertain Guide, Working Paper no. 298, mimeographed (Berkeley: University of California Institute of Urban and Regional Development, September 1978).

43. The World Bank, Project Supervision Handbook, p. 14.

operations of the executing agency, as distinct from the progress in project implementation, could be facilitated by obtaining information on a few key performance indicators. Such indicators should be tailored to each situation. Whether designing the progress reports on project performance or the performance indicators of the executing agency, an attempt should be made--and this applies to data collection in general--to focus on key variables and to avoid comprehensiveness for its own sake. Data overkill can be very expensive.

A useful report that could be jointly prepared by the donor and the executing agency upon the completion of a project is a "project completion report" (PCR). A PCR essentially covers the following:

-Any significant deviation in the project implementation forecasts

-Significant project developments/issues/problems and the remedial measures taken

-Changes in project cost estimates and in financing plans

-Changes in the scope and size of the project

-Assessment of the executing agency/consultant/contractor or supplier's performance

-Compliance with loan covenants

-Prospects or likelihood of achieving the project objectives

-Lessons learned and recommendations for follow-up, and so on.[44]

The PCR would be a great help in conducting the ex post evaluation of project performance. While the PCR should be prepared soon after the project has become operational, say about six months upon completion, the ex post evaluation of the project effects should follow in another year or two and ought not to be rushed.

Sufficient time should elapse before the evaluation of the social impact of a project in order for the intended effects on the target groups--and the unintended effects on the secondary, "spillover" groups--to become clear.

Social impact analyses, which are partly based on objective facts and partly on subjective preferences, have become quite popular because it

---

44. ADB, Loan Administration Manual, p. 37.

is believed that any single digital measure of project or program repercussions is inadequate and even misleading for designing and redesigning policy, programs, and projects. Since projects are becoming increasingly multipurpose and integrated, transcending sectoral and administrative boundaries at a time when striking spatial balance, meeting basic human needs, and confronting absolute poverty are the dominant themes of development policy, evaluation techniques should be broadly based, specific, and oriented toward target groups in space and time. Obviously, any variant of social benefit-cost analysis that generates a numerical measure of impact would still be too aggregative.[45]

This has led to the search for social indicators for measuring the social impact of projects and programs. A lot of work has already gone into this endeavor and much ground has been covered. But much more needs to be done to operationalize these indicators in terms of project preparation, project appraisal, and the evaluation of project impact. Some issues that are not easily resolved are which human needs should be considered as basic; how to determine distributive weights, estimate country-specific or even area-specific parametric values--such as the opportunity cost of capital and labor or the trade-off between present and future consumption--convert indicators to a common scale, and assess equity between people, places, and generations.

Finally, evaluation is a political activity in which different parties in the evaluation exercise--policy makers, planners, funding sources, project managers, project beneficiaries, and so on--have diverse points of focus and rather distinct though related interests at stake. And it is not easy to devise a framework for conducting evaluation within which all these sometimes incompatible interests can be reconciled.[46]

All things considered, however, there are many signs that evaluation is among the fastest growing activities in applied social research. It is also becoming increasingly important within organizations that are responsible for social projects and programs. There are many reasons for this trend to continue in the future:

> Perhaps the main reason is an increasing scepticism among decision makers, planners, project staffs, and target participants that common sense and conventional wisdom are sufficient

---

45. See Appendix H on Social Soundness and Analysis. Also see Howard E. Freeman, Peter H. Rossi, Sonia R. Wright, Evaluating Social Projects in Developing Countries (Paris: OECD Development Center, 1979).

46. At least nine interest groups could be identified: policy makers, project sponsors, evaluation sponsors, target participants, project management, project staff, evaluators, project competitors, other concerned interests, e.g.: local governments, neighborhood communities, and so on.

bases upon which to design social projects so that they achieve their intended goals. Decases of experience with attempts to solve the problems represented by an exploding population growth, the maldistribution of resources within and between societies, with popular discontent, rising crime, continued educational deficiencies of adults and children, rising drug and alcohol addictions rates, apparent increased weaknesses in traditional institutions such as the family, and so on, have led to a realization that these are obstinate and difficult issues to deal with. This scepticism has led decision makers to seek ways in which they can learn more quickly and efficiently from their mistakes and to capitalize more rapidly on effective measures. To fund an evaluation is to express that scepticism or at least to state implicitly that a proposed social project may not be as effective an answer to a problem as hoped.

A second major reason for the growth of evaluation activities has been the development of knowledge and technical procedures in the social sciences. The refinement of sample survey procedures has provided a powerful information gathering method. When coupled with the more traditional experimental methods in the form of field experiments, the combination is a powerful technical means adapted to the testing of social projects. Advances in measurement, statistical theory, and in substantive disciplines of the social sciences have also added to the increased ability of the social sciences to take on the special tasks involved in evaluations.

Finally, there are also changes in the political climates of our times, that lead to more concern for social projects. Increasingly, we have come to believe that social problems are not fixed features of the condition of humankind but rather subject to change and amelioration through the reconstruction of human institutions. We believe more than our ancestors did that societies can be improved, and that the lot of all can be enhanced by the betterment of the disadvantaged and deprived.[47]

47. Evaluating Social Indicators, op. cit. pp. 209-210.

VII. SUMMARY

How shall we sum up the state-of-the-art of the project cycle? We can begin by saying that no project is an island impervious to the environment in which it exists; there is a continuous interaction between the two and among the various phases of the project cycle itself.

Second, projects can no longer be considered as single-purpose investment activities that have an easily recognizable beginning and end. Instead, most projects are multipurpose and complex mixtures of investment and technical assistance programs designed to attain certain social and economic objectives on a continuing basis through the development of viable institutions.

Third, while all phases of the project cycle are interdependent and interface back and forth, project development is a learning process whose fallout tends to go far beyond the confines of a single project. It has, in fact, become a potent factor in the refinement of the art of development administration--a laboratory for devising and testing workable management tools.

Fourth, sound identification, preparation, and implementation of projects is the stuff that makes successful projects. The significance of well-designed feasibility studies directed equally toward developing appropriate engineering and software components of projects cannot be overemphasized. At the same time, the need for fullblown comprehensive sector studies and quantitative project appraisal techniques should be viewed in a realistic perspective. A reduced approach to data collection is encouraged.

Fifth, the evaluation of projects and programs is a rather nascent art which is still an uncertain guide at best. Evaluation is a continuous activity occurring both during the entire project cycle and upon its completion. The former requires suitable reporting procedures as instruments of project monitoring and control. The latter requires procedures for assessing both project success and its social impacts. The articulation of a social impact analysis to assess the intended and the unintended repercussions of the investment and technical assistance activities must necessarily be a self-sustaining process which is coterminous with the art of project development. The two reinforce each other.

Sixth, quite a heavy mantle falls on the shoulders of the international aid agencies in regard to the development of technical assistance and investment projects. Systematic attempts should be made by these agencies to promote practices and procedures that are free of built-in biases of bigness, capital-intensiveness, foreign exchange and import intensity, injudicious cost recovery, and legalism. Rather, their policies should be conducive to making fuller use of the natural resources of the economy, including labor, and should encourage domestic manufacturing and procurement of goods and services, including consultancy services, whenever economic and efficiency considerations permit. In view of the social orientation of projects and programs that are designed to reach the poor and the disadvantaged, the aid agencies should increase their financing of local currency costs, as well as the recurring, operating, and maintenance costs of such projects and programs.

Seventh, since very little is yet known of the trickle-down effects of development policies, research efforts should be increasingly directed toward the following:

(1) Maximization of the socio-economic impact of projects and programs designed to reach the lowest income groups in LDCs

(2) Development of alternative strategies for implementing integrated area or rural development projects and programs

(3) Development of replicable prototypes of development projects in LDCs[48]

Finally, the project cycle cannot but operate within the totality of the national and international environment. For example, to the extent that a pro-urban bias[49] is present in national policies, or there is a bias against free access in international trade,[50] it would have a far-reaching impact on project choice. Two points deserve reiteration here: the question of perspectives, and the question of power-relationships.

Perspectives

Different parties to the development of projects and programs have different perspectives which are reflected in the definition of needs and the choice of preferred solutions. After all, concepts like "common good" and "general will" could always be interpreted to suit one's purpose. At the same time, compromise solutions, under the disguise of consensus, might be no more than vehicles of vested interests.

Similarly, the national, regional, subregional, and local perspectives of planning could provide totally different need identification, resource mobilization and allocation, and patterns of organization and management, resulting in radically different scenarios of economic and spatial development.

Or take the case of the donor agency/host country perspectives. The functional constraints of the former need not be compatible with the needs of the latter, although there may be several points of convergence between the two. Consequently, the host country interests might not be best served by the policies and procedures of the donor agency.

---

48. OECD Development Centre, Seminar on Development Projects Designed to Reach the Lowest Income Groups: Summary and Conclusions (Paris, August 1975). See Appendix N on Replicability of Projects.

49. Michael Lipton, Why Poor People Stay Poor: Urban Bias in World Development (Cambridge, Mass.: Harvard University Press, 1977). While Lipton suggests that the urban bias in world development keeps poor people poor particularly in the countryside, Jakobson adds that there is considerable "anti-urbanism" underlying the urban bias itself which keeps "both the urban and rural poor in misery." He suggests that the philosophical origins of the "conceptual dilemma" viz., the inevitability of urbanization on the one hand, and regarding it as "unconditionally bad" or "conditionally bad" on the other, are traceable to the anti-urban tradition in the literature on planning and development. Leo Jakobson, "Conceptual Dilemmas: Overcoming the Anti-Urban Tradition" (Madison, Wisconsin: University of Wisconsin, March 1979).

50. Independent Commission on International Development Issues, North-South--A Program for Survival: Report of the Independent Commission on International Development Issues (Brandt Commission Report) (Boston: The Massachusetts Institute of Technology Press, 1980).

Power Relationships

While addressing the question of mass poverty, particularly in rural areas, the point is made by some that the elite class acts as an obstacle to change; that redressal of poverty cannot be accomplished without either removing the elites from the scene or at least stripping them of the symbols of power and privilege.

That power relationships permeate the entire fabric of interest groups, there is no denying. But to believe that development projects could be designed exclusively for the benefit of the poor, or that the elite could be excluded from participating in the development effort, is to court disillusionment. Even revolutions might amount to no more than replacing one set of elites with another.

Thus, the nature and process of change is conditioned by the environment in which it takes place. We are at once the product and the agent of such change, and development projects can help us bring it about.

APPENDICES

APPENDIX A

BASIC NEEDS AND ECONOMIC GROWTH

Basic human needs

The current emphasis on "basic human needs" is a logical step along the path of development thinking. The evolution from a concern with growth, employment, and redistribution to basic needs shows that our concepts have become less abstract and more disaggregated, concrete, and specific.

The basic needs approach is concerned with particular goods and services directed at particular, identified human beings. Another advantage of the basic needs approach is that it is a more positive concept than the double negatives of eliminating or reducing unemployment, alleviating poverty, or reducing inequality. The basic needs approach spells out in considerable detail human needs in terms of health, food, education, water, shelter, transport, simple household goods, as well as non-material needs like participation, cultural identity, and a sense of purpose in life and work, which interact with the material needs.

Moreover, basic needs have a broad appeal, politically and intellectually. Because of the political appeal, they are capable of mobilizing resources, which vaguer objectives, like raising growth rates or contributing 0.7 percent of GNP or redistributing for greater equality, lack. Intellectually, they provide a key to the solution of a number of apparently separate, but on inspection related, problems. Urbanization, the protection of the environment, equality, international and intra-Third World trade, appropriate technology, the role of the transnational enterprise, the relation between rural development and industrialization, rural-urban migration, domination, and dependence all appear in a new light and are seen to be related, once meeting the basic needs of men and women becomes the center of our concern.

Basic needs is therefore thrice blessed. It is an end in itself, not in need of any further justification. But it is also a form of human resource mobilization, it harnesses the factor in abundant supply in the poor countries, and, by reducing population growth, it economizes in the use of resources and improves the quality of labor.

If this effective and concerted attack on hunger, malnutrition, ignorance, and ill health also mobilizes more international resources, by making meeting basic needs a first charge on our aid budgets, it would testify to the fact that we have begun to acknowledge our membership of the human family.[1]

If a country's historical growth rate was 6 percent per year, the maximum effect will be to reduce that rate to 5.5 percent: At the most "the trade-

1. Paul Streeten, "From Growth to Basic Needs," Finance and Development, (September 1979) pp. 28-31.

off ratio" between redistribution and growth is 10:1; in other words, a 5 percent transfer of GNP toward "consumption" results in a half a percent lower GNP growth.[2]

2. Marcelo Selowsky, Balancing Trickle Down and Basic Needs Strategies: Income Distribution Issues in Large Middle-Income Countries with Special Reference to Latin America, World Bank Staff Working Paper No. 335 (1979).

APPENDIX B

BASIC NEEDS AND DISTRIBUTION WEIGHTS IN PROJECT CHOICE

"There is much to suggest that progressivity is considered socially desirable, even in advanced countries. It is certainly so considered in the context of public policy where poverty and inequality are pervasive. The use of progressive weights would reflect the attitudes and views in such societies. Nonetheless, use of progressive weights in public sector evaluations would not still be necessary if there existed better alternative instruments of policy. The other policy options, such as land reform and fiscal policy, are, however, often limited or severely constrained. The greater the poverty and the inequality problem, and the more limited the alternative policy options, the greater is the need to introduce progressive weights.

The social and political climate in many of the poorer developing countries is often such that policy makers and planners are pressed to use progressive weights implicitly. All project and policy proposals tend to be infiltrated by sentiments bearing on inequality and poverty. In that context the introduction of progressive weights, even if only rough, can help bring about much greater consistency and discipline than otherwise possible.

It is idle to think that even when one knows that progressivity is a major concern, the economist should merely present his analysis in terms of equal weighting and then let the policy makers take "non-economic" factors into account. Decision makers cannot introduce their judgments on "non-economic" factors in a rational manner unless economists show, via sensitivity tests, exactly how their results are affected by judgments concerning weighting of consumption gains.

It should be noted that the weighting scheme introduced need not be very precise, but need only be consistent with the fundamental notion of diminishing marginal utility of income.

The weights should also be regarded as "marginal." If poverty and income disparity in the country are serious issues and if other policy instruments are difficult to use, then the use of progressive weights in project choice should move the economy in the right direction. The desired degree of progressivity should change over time as poverty and inequality are ameliorated. To use the popular jargon of shadow pricing, one should look for "second best" weights, not the weights which in some fundamental sense represent the ultimate general will of the country. Thus, one should not be disturbed by the fact that any consistently progressive scheme implies that, barring other considerations, it would be desirable to have complete

---

Source: Anandarup Ray, "Basic Needs and Distribution Weights in Project Choice," mimeographed, World Bank (May 1978).

equality. The whole issue will disappear long before complete equality is reached. The weights will change.

To illustrate further, note that if the weighting function is exponential, the weights become very large for those near starvation: the weights tend to infinity! One can of course avoid such tendencies by setting maximum and minimum values for the weights, but even if this is not done, would this mean that the country should stop everything else to distribute bread to all the poor? If poverty is at all widespread, any relief program will soon run out of money. The premium on scarce budgetary resources will soon become very high. Thus the high consumption weights will be offset by high weights on fiscal resources. The shadow price of fiscal resources can be considered constant only "at the margin."

Many people do not think it is worthwhile to distinguish between income levels within the affluent group. People are mainly concerned about the distribution between the rich and the poor. If so, a weighting scheme can be devised which gives equal weight to all those above a certain income level, and also equal but greater weight to all those below. This would be one way of emphasizing poverty redressal rather than reduction of income inequality per se. Poverty weighting may thus be viewed as a special case of progressive weighting.

We recommend that the analysts examine the issue of distribution weights in each country, in the light of its objectives, constraints and the availability of other policy instruments. There should be no command to use a fixed weighting scheme, whether the equal weighting scheme of traditional analysis or the more progressive weighting schemes that have been proposed in the Bank. Whichever weighting scheme is considered appropriate in the country context, the analysts should always allow for sensitivity tests.

APPENDIX C

SOCIAL IMPACT EVALUATION

The impact approach to the appraisal of projects

The impact approach is used by the U.S. Agency for International Development (AID) and by the Swedish International Development Authority (SIDA). This method elaborates a hierarchy of objectives and tries to establish the impact of a project on the development goals of a country. It is basically a tracer study of the benefits to link logically the immediate objective of a project (target) to the intermediate (sector objective) and to the final development goals. The method not only determines the contribution of the project to the development goals, but also specifies under what conditions and how the project contributes to the development goal.

The USAID methodology of project appraisal consists in the "...establishment of a logical framework for the project which: i) defines project inputs, outputs, purpose and higher goals in measurable or objectively verifiable terms; ii) hypothesizes the causal (means-end) linkage between inputs, outputs, purpose and goal; iii) articulates the assumptions (external influences and factors) which will affect the causal linkages, and iv) establishes the indicators which will permit subsequent measurements or verification of achievement of the defined outputs, purpose and goal."[1]

The logical structure and a 5 x 5 appraisal matrix are depicted in Figure III and Figure IV.

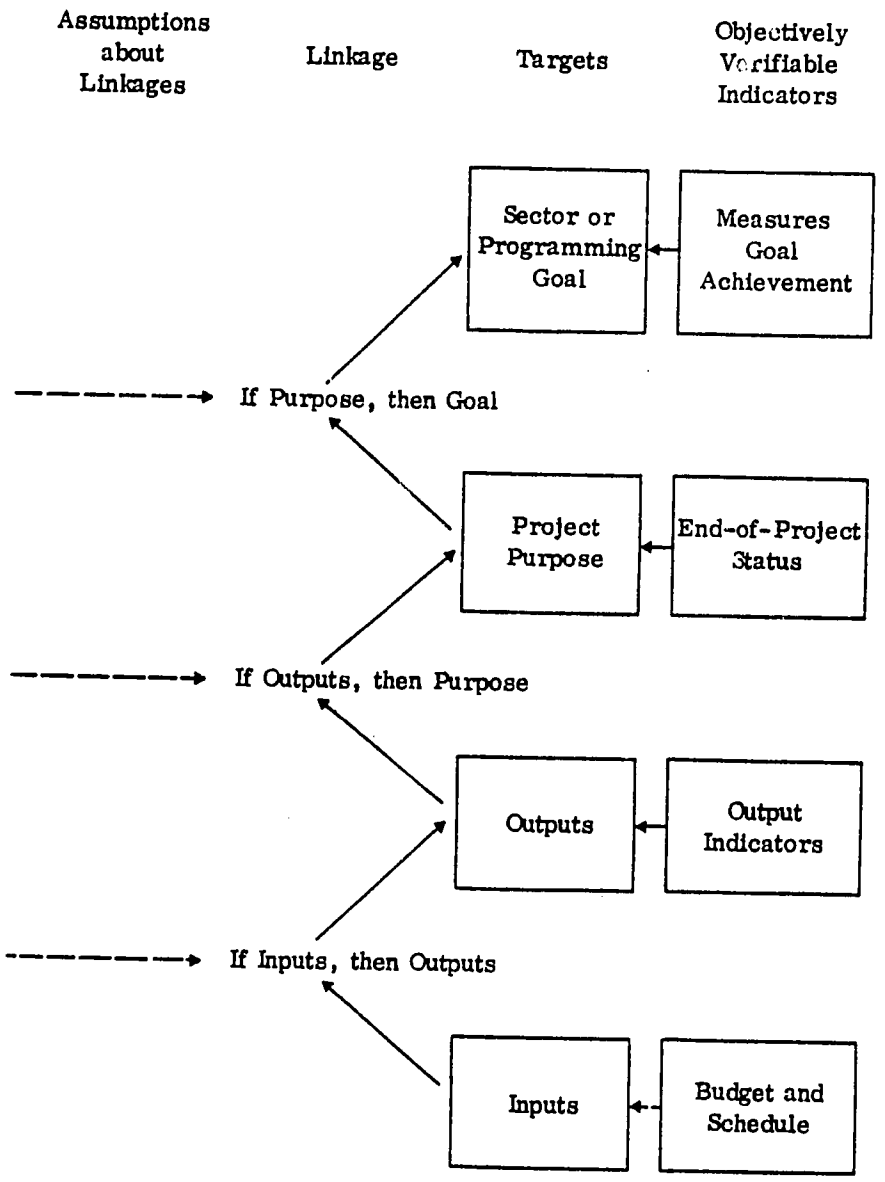
The impact approach has the following advantages:

- it tries to make the project appraisal transparent by explicitly stating the assumptions underlying the analysis and by allowing a check on the proposed hypotheses and expected results in an ex-post analysis;
- it deals explicitly with a multitude of social goals and doesn't require the reduction of the benefits into one figure;
- it is understandable to non-scientists. It therefore can be used as a tool to clarify the trade-offs among objectives and thus to ameliorate the decision-making process;
- it is flexible with regard to information and skills requirements: it can incorporate social cost-benefit analysis, use input-output tables and partial models. But it can also be used with rudimentary information and skills, albeit at the cost of more hypotheses and uncertainties.

1. Note by USAID submitted to OECD for the DAC meeting of Experts on Aid Evaluation, Amsterdam, 27-29 June 1973, p. 1.

Source: N. Imboden, A Management Approach to Project Appraisal and Evaluation (Paris: OECD Development Centre, 1978).

Figure III. THE LOGICAL STRUCTURE OF THE IMPACT APPROACH



SOURCE: USAID: Project Evaluation Guidelines, 3rd edition, August 74, page 2, Washington.

Figure IV. LOGICAL FRAMEWORK MATRIX

Narrative summary	Objectively verifiable indicators	Targets	Means of verification	Major assumptions
Goal				
Objective				
Target				
Output				
Input				

Based on: Project Assistance Handbook 3, USAID, September 1, 1975. Appendix 3E to Chapter 3 HB3.

The impact approach provides the necessary framework to analyse the effects of a project on various development goals. However, it provides us with no information on the relevance of those goals nor about the efficiency of the proposed project unless the project is compared with alternative courses of action.[2] The impact approach has therefore to be seen within a development management system that includes goal specifications, the identification of alternatives and the determination of feasible alternatives and their relative impact on the goals pursued.

It may be further noted that impact evaluation distinguishes itself from process evaluation and monitoring in the following respects:

- impact evaluation is done at the end of the project or some time after the end of the project; this does not mean that impact evaluation is planned and executed at the end of the project. Impact evaluation requires information on the situation at the beginning of the project and during its execution. The decision whether to undertake an impact evaluation or not has therefore to be taken at the beginning of the project;

- impact evaluation is comprehensive: it addresses the question what has happened and why it has happened. Since impact evaluation attempts to attribute the effects to the programme, it necessarily includes an implementation evaluation.
  It is obviously important to know what sort of programme has (or has not) produced the measured effects. An impact evaluation without an implementation evaluation risks attributing effects to a treatment that never existed or attributing the failure of a programme to the content of the programme rather than to its faulty execution;[2]

- impact evaluation provides information for programme and policy managers, not project management.

---

2. USAID, Handbook 3, addresses the need to integrate planning and project appraisal: "Definition of the problems to be solved is the first step... Subsequently alternative courses of action will be considered as possible solutions to the problems and eventually a preferred alternative will be selected," see Chapter 3, p. 2.

APPENDIX D

USAID HANDBOOK

CRITERIA FOR SELECTING AMONG ALTERNATIVES

A. When a project is proposed there is an implicit assumption that the project represents the best alternative to the solution of a problem, and that addressing the problem represents the best alternative for fulfilling the overall development objectives, problems, and projects is a conjoint activity of the less developed country (LDC) (or intended recipient institution/entity) and AID. The development plan of the LDC and the Congressional Mandate for AID are basic policy guidelines for establishing objectives and selecting problems and projects. *The identification of alternatives will be done in the Mission, however, it is often the case that Mission libraries and files do not provide a comprehensive record of the variety of ways in which AID and other organizations have attempted to solve specific development problems. To address the need for information on alternative approaches and past project experience the Office of Development Information has been established. This office is a service office and is not a participant in the project approval process. Attachment A is a format that can be used to request information concerning potential projects as well as other questions. Searches by this office should be considered a resource in the process of defining alternatives during the early phases of a project.*

B. Selection of preferred alternatives requires the exercise of professional judgment. No single mechanical process nor criterion can replace informed judgment in the selection process. The factors listed below should be considered in most any AID undertaking, but the weight given to each will vary from country to country, sector to sector, and project to project. A system for consideration of alternatives in the project selection process will give explicit consideration to what otherwise might be implicit assumptions.

1. Problem Priorities

The problem to be solved must be of a nature and priority which merits expenditure of AID funds. The number of apparently benefical projects which might be undertaken in any country is huge. The task facing the AID and LDC decision makers is to select the most critical problems for solution. While the problem may be posed or identified in the Development Assistance Program (DAP) or the LDC National Development Plan, it must be considered in the light of legislative and AID policy statements, as well as in terms of its overall soundness.

2. The Target Area - Number of Poor People Affected

A project which serves the largest number of people in the target area or in the target population group, increases income and/or employment, and/or is aimed at the poor majority should be a preferred alternative. Projects which assist the greatest number of

low income people to increase their productivity and to increase their earnings are a preferred alternative. Analysis of project impact on both numbers of people and productivity will provide a guide to selecting the alternative. Among the preferred alternatives that target the largest number of the population in lower income groups, especially in agricultural production, the selection of those alternatives that focus on women should be made, especially where production by women is of greater importance than that of men.

3. LDC Institutional Development and Related Long-Term Self-Help Measures

a. The alternative selected should be one which makes an optimal contribution to LDC institutional development and self-help efforts. One of the primary concerns of any project is to leave in place a functioning capacity to manage, fund, maintain, and operate the institutions and facilities developed, improved, or established through assistance projects.

b. A project which maximizes use of local insitutions will normally be preferred to one which depends more heavily on foreign institutions. The use of local institutions provides experience and earnings for local people and provides a vehicle for the development of management capability and institutional cohesion. The development of local capability gained during project development and implementation makes the LDC less dependent on outside assistance after the project is completed. Collaborative and joint efforts are also given a high priority in AID's legislation.

4. LDC Participation - Cost Benefits

a. Normally a project which achieves its purposes at the minimum total cost with the maximum participation by host country counterparts and organizations is a preferred alternative. If a primary project purpose is to achieve the maximum internal rate of return (IRR), or discounted benefit-cost ratio, the consideration of a discounted stream of costs and benefits may help to determine the most desirable project and, therefore, the preferred alternative.

b. Caution is necessary here, however, because so many assumptions must be made as to future cost, present and future benefits, the social and economic climate, and future developments in the international and LDC economies, that calculated internal rates of return and predicted cost-benefit ratios themselves represent numerous assumptions. While it probably can be assumed that below some minumum calculated internal rate of return some projects should not be considered, it does not follow that projects which exceed the minimum or even higher IRR's will necessarily contribute to achieving development objectives. A benefit cost comparison between alternative projects can be a valuable guideline in helping to determine the preferred alternatives, but only when the purpose served and the problem solved by the project are clearly demonstrated to contribute to overall economic and social development,

in accord with AID and LDC policy criteria. One cannot draw a direct cause and effect relationship between a predicted high benefit-cost ratio and the achievement of development assistance objectives, without consideration of such other criteria.

5. LDC Participation - Labor

A project which maximizes the use of local labor and minimizes the investment in capital, imported materials and equipment without a significant decrease in the quality of the project or increase in total project cost, is to be preferred. Analysis of the labor intensity of the technology required for various alternatives will reveal projects which will provide greatest employment opportunities for local personnel, both during the implementation phase and after the project is completed. (See Policy Determination 48, 10/2/72, entitled "Employment and Income Distribution Objectives for A.I.D. Programs and Policies."

6. LDC Participation - Motivation

A preferred project can predict and utilize the motivation of the target populations and institutions. Motivation of the various sectors of society, of the target population, and of implementing agencies and officials have a great bearing on project success. These motivations should be identified during the project analysis, and actions planned to take advantage of them or to modify them as necessary in the course of the project. The willingness of the LDC tc consider this aspect of project selection and design may indicate a preferred alternative and increase the probability of achieving project objectives.

7. The Target Area - Intersectoral Relations

Projects for which interaction and dependencies with other sectors are best understood normally present a preferred alternative. All projects are affected by the institutional environment within which they are implemented and operated. Where the effect of interactions and dependencies are difficult to predict or control, the chances of project success are reduced. Careful analysis and understanding of these factors is essential to project success. Ways must be found to minimize negative cross-sectoral effects or to include within the project itself means of modifying negative and enhancing positive intersectoral effects. A sector analysis which includes these factors will simplify selection of the preferred alternatives.

8. Target Area - Enviromental Concerns

Project alternatives which minimize detrimental impacts on *or improve* the *overall* ecology and physical environment are normally preferred.

Preliminary environmental assessments of the various proposed alternatives should reveal the extent to which the environment will be degraded or improved by the various alternatives. All development projects of significance will have an environmental impact which must be analyzed. The impact can be either beneficial or detrimental or both. It cannot be assumed that small projects or a series of small projects will have an insignificant impact solely because of their size. For instance, poorly designed rural roads can create flooding, drainage, and erosion problems. Small irrigation systems can increase the incidence of malaria and Schistosomiasis. Normally, alternatives in project design and implementation can be found which will mitigate these effects. Care and consideration of alternatives by competent professionals is the best insurance in selecting the preferred alternative.

APPENDIX E

SOME EXAMPLES OF APPROPRIATE TECHNOLOGY IN WORLD BANK ACTIVITIES

SUMMARY AND CONCLUSIONS

1. This report provides selected examples of the efforts of the World Bank to include technology that is appropriate to local conditions in the project it finances in developing countries. It also describes efforts of the Bank to assess, to evaluate, and when necessary to promote technological innovations appropriate to developing countries.

2. The policy of the World Bank concerning the use of technology is:

(1) that the technology used in the projects it finances should be appropriate to development goals and to local conditions;

(2) that the Bank, by itself or in collaboration with others, should promote innovations needed to make available to developing countries technology appropriate to their needs;

(3) that Bank-financed projects should develop local capacity to plan for, select, design, implement, manage, and, when necessary, to adapt and develop appropriate technologies.

3. The appropriateness of a technology used in developing countries is determined in relation to the development goals of the country, the purpose for which it is being used and the likely beneficiaries given the prevailing institutional framework. Ideally, such technology should be seen to be appropriate in terms of its impact on resource use relative to local factor costs, the size and preferences of local markets, the sophistication of the local work force and managerial cadre, the availability of raw and semi-finished goods, and in relation to present and potential capacity for local planning, and implementation.

4. In most developing countries, an appropriate technology would be one which made full use of abundant labor while minimizing the use of scarce capital and technical skills. The shortage of capital in developing countries forces a choice between concentrated investment that will increase the productivity and incomes of a relatively small number of workers, or making much lower investments per capita to raise the productivity of the mass of people in the country. The latter, more equitable course, leads directly to the requirement for technologies that require low inputs of

---

Source: World Bank, Appropriate Technology in World Bank Activities, mimeographed (July 1976).

capital and scarce skills so that they can be extended on a scale commensurate to the need. The use of appropriate technologies consequently demands a recognition on the part of technology users in developing countries that in order to improve the lot of the vast majority of people they must, at least in the short run, accept standards of service and levels of "modernity" lower than those that might be found in more developed countries.

5. In practice, many factors tend to channel developing countries toward the use of inappropriate technology, Often government policies overprice labor and underprice capital and foreign exchange. Credit institutions, raw materials allocations, and technological and managerial assistance services often discriminate against the small producer (farmer or entrepreneur) who might be expected to use more appropriate technology. Special interest groups frequently want to use technology that, while appropriate to their narrow goals, is highly inappropriate for the country as a whole.

6. Further, imported technologies (whether or not they are appropriate) are often preferred because they are convenient to the decision maker and the development assistance agency. They are generally familiar and well-tested, can be purchased in packaged, guaranteed form, installed with relatively little risk or delay, maintained with external technical assistance, and are backed by the technological resources of the developed world. Against these conveniences, most imported techniques use too much scarce capital, too little labor, and often produce products that have limited markets.

7. The use of technologies specially designed to be appropriate to developing countries, by contrast, places increased demands on local managerial and technical staffs, and often demands major institutional innovations and changes in public attitudes and in government regulations and policies. It also demands willingness to overcome vested interests and, in some cases, to accept technological risks. But in the longer run these problems must be overcome if the economy is to develop its physical and human resource base fully.

8. In the early days, the World Bank made loans mainly for large, engineering-intensive projects, like power generation, where the basic choice of technology was limited. The primary role of its technical staff was to help countries implement prudent engineering and financial practices. The Bank's advice to its member countries on economic policy urged, as it still urges, adoption of a policy framework that would improve the market signals within which technological decisions are made: realistic exchange rates, wages and interest rates, and a liberal trade policy.

9. More recently, the emphasis of Bank lending has shifted toward projects intended to help the poor directly, as it has become more evident that the amount of "trickle-down" to the poor is limited and that the poor are relatively neglected. This change in emphasis has caused the Bank to reexamine currently accepted technologies and, in many cases, to redesign them to match the development needs and resources of the country. The Bank still

has much to learn about the problems of the poor and of the technologies best suited to relieving them, but it has made a deliberate start in this direction. Accordingly, the Bank is assessing the scope for using more appropriate technologies in all sectors in which it lends, in an effort to conserve scarce resources and to free scarce capital for investment elsewhere.

10. Standard Bank project procedures are used as the primary means of promoting appropriate technology in developing countries. Project preparation, in combination with sector studies, improves understanding of sector needs and alternatives for supplying them. Bank appraisals increasingly apply engineering and economic tests to insure low cost technological solutions and an acceptable rate of return, using shadow prices better to reflect the true value of inputs and outputs, where these differ substantially from their market prices. In addition, the Bank is experimenting with a new appraisal methodology which assigns a higher weight to costs and benefits accruing to poorer people.

Appropriate Technologies in the Various Sectors of Bank Lending

11. The recent expansion of Bank lending for the rural poor is aimed at providing small farmers with production technology together with credit, physical inputs, technical services, and improved market access. In irrigated areas, the currently available production technology for wheat and rice--high-yielding seeds, fertilizer, improved cultivation practices, controlled application of water--can be as efficient on small farms as on large farms if the costs of distribution of these inputs can be reduced. Bank-financed projects have therefore emphasized strengthening of credit and extension organizations to encourage the use of this technology. Mechanical technology, on the other hand, must be designed specifically to meet the needs of the small farmer. The Bank is pursuing the introduction of a number of mechanical improvements, such as handpumps for groundwater irrigation.

12. Suitable technological packages for small farmers in non-irrigated areas and for those growing other than cereal crops are less readily available. Consequently, more than half of all Bank-financed agricultural projects have provision for research and development work to appropriate technological packages. In addition, the several research centres financed by the Consultative Group on International Agricultural Research (which the Bank chairs) investigate appropriate cropping patterns, inputs, and farm management practices for these farmers. Other Bank-financed projects have used simple appropriate technologies for raising fish and livestock, for designing curricula and buildings for rural education, and to provide village water supply and health clinics.

13. Bank-financed projects intended to help the urban poor include projects to increase the supply of minimum standard housing at a cost within the reach of the 50-80% of the urban population that is too poor to afford conventional public housing units. The main vehicles for doing this are squatter upgrading projects and projects supplying minimum services, at low cost and low standards, to newly developed building sites.

14. Bank-financed municipal water supply and sewerage projects incorporate simpler, less expensive technologies and frequently lower standards of service than those typical of developed countries in an effort to reach more people with limited investments. These include public hydrants for water supply, and stabilization ponds for sewage treatment.

15. Bank efforts to assist small-scale industry have hitherto stressed support to credit institutions (development finance companies) and to industrial estates. The Bank is now developing an approach emphasizing the more labor-intensive parts of the small industry sector, and based on the delivery of a package of credit and managerial and technological assistance.

16. Bank-financed urban transport projects are similarly geared to the needs of mass transport, and restraint of expenditure benefitting primarily private motorists. Procurement of buses and mini-buses is considered as an integral part of a package which includes policy measures and long-range plans for more rational and efficient use of public transport facilities.

17. The Bank is also assessing and evaluating technological alternatives in a number of the sectors in which it lends. In a major study of possibilities for labor-capital substitution in civil works construction, in which individual operations have been monitored in great detail, the Bank has found that labor-intensive technology as presently used is not economically competitive with equipment-intensive methods because its primary emphasis is on job creation and not on efficiency. Labor-intensive methods can be made economically competitive in low wage economies if labor productivity is increased by using incentive pay, by improving management and organization, by improving standards of worker health and nutrition, and by using improved hand tools and other hardware. The Bank is making an effort to explore the techno-economic feasibility of production techniques in cement, steel and fertilizer industries that are smaller in scale and less capital-intensive than those typical of developed countries. The Bank is also examining opportunities for labor-capital substitution in manufacturing industries. The Bank's affiliate, the International Finance Corporation, is studying opportunities for alternative technology choice in the textiles and paper industries.

18. In the energy sector, the Bank is studying the possibility of saving capital by supplying electricity using lower engineering specifications, with somewhat less reliable standards of service. It is following progress in the technology of small, decentralized sources of energy and has taken a special interest in the possibilities for economic use of biogas and photovoltaic technology. The Bank is also financing research on solar ponds through an industrial research and development loan.

19. As these examples suggest, the Bank seeks to promote appropriate technology through its project by the use of:

(i) Applying, or occasionally designing, an appropriate system for producing a given production---e.g., the use of labor-intensive methods of road construction, or farming systems appropriate to small-scale cultivators. Designing systems may amount to no more than combining existing components into a new package; or it may require modification of some (possibly most) of the components, perhaps on the basis of research findings. Less directly, the Bank will also lend to support producers who will develop more appropriate technology during their ordinary economic activities (e.g., small-scale farmers or entrepreneurs) or organizations that can generate appropriate technological innovations (e.g., planning and design staffs of government agencies, local consulting or engineering firms, research and development laboratories).

(ii) Fostering the redesign of products so that they are more appropriate to consumers and to local production techniques --for example, pump hardware intended to meet the needs of small farmers; low-standard houses that can be built by unskilled labor at a price a poor man can afford; transport systems that require less capital investment than private automobiles and their supporting infrastructure--and, in general, products appropriate to labor-intensive manufacture.

(iii) Improving the organization of market institutions needed to make available credit and other inputs, technological information, and markets for the sale of new of increased production, as, for example, by creating cooperatives for small entrepreneurs or farmers, or by changing the orientation of credit institutions to make mortgages available to small farmers.

20. These three elements must often be combined. Design of an appropriate product is sometimes a prerequisite to the introduction of a more appropriate production system, and neither may be possible without reorganization of the market and changes in policies and institutions. For example, in the sites and services approach to urban housing, the redesign of the product by reducing housing standards and the improvement of the credit market by offering building materials loans, are prerequisites to the use of an appropriate production technology, such as self-help construction. In projects aimed at both small farmers and poor home-owners, credit institutions must be induced to take on the risks and administrative burdens of lending to a large number of borrowers with limited or no collateral. Villagers must organize themselves to benefit from extension by progressive farmers, or for construction of physical facilities needed for soil conservation or rural education, just as self-help home builders must organize themselves to take advantage of available technical assistance.

21. The Bank seeks to promote the use of appropriate technology through a variety of mechanisms: by incorporating appropriate technology in the projects it helps to finance; by lending for research, especially in agriculture; by assessing or developing technology in collaboration with research organizations or with other development assistance agencies; and by marshalling international funding, as for the Consultative Group on International Agricultural Research.

22. By far the most important of these mechanisms is project lending to promote the widespread application of technological improvements conceived and experimented with elsewhere or, occasionally, in earlier Bank-financed projects. Bank-financed projects have proved to be a good vehicle for establishing appropriate product design and production process and for promoting and initially financing the necessary intermediary institutions. "Demonstration" projects or "technical assistance", without sufficient financing and without establishment of a local organization to carry out a significant initial slice of the total program under actual field conditions, have been formed to be far less effective. A project must be executed on a large enough scale and under typical enough circumstances to demonstrate that a positive mass response to the appropriate technology which it embodies can and will take place. For example, demonstration plots on agricultural department farms may prove a new crop technique or seed variety under best practice conditions and yet say very little about their viability in a particular rural setting with ordinary farmers.

23. The Bank recognizes the importance of stimulating appropriate technology and the need to do more in this field. There are, however, several constraints. Making an increasing contribution to appropriate technology requires more technological analysis in an increasing number of projects, more time to develop the necessary expertise and outlook, and more sector knowledge to identify possibilities. Project preparation is more complicated and requires more assistance from Bank staff. Execution of the projects is not routine, particularly when new market mechanisms must be developed. After the point where normally a project would be called "completed," project results must be studied in order to take full advantage of the experience gained.

24. The Bank's involvement in the development process in many countries puts it in a position to affect at least to a degree, both the design of projects for current investment and the future evolution of technology in developing countries. The Bank's position as a major investor in development projects gives it both a strongly practical orientation and strong links of communication with finance and planning ministries--communication which is unfortunately often lacking in government bodies concerned with science and technology policy. Thus the Bank projects can serve as a vehicle for local technologists and scientists to participate in the selection, and where necessary, the development of appropriate technology.

In summary, we may distinguish four dimensions of appropriateness:

(1) Appropriateness to Goal. Does the technology support the goals of development policy?

(2) Appropriateness to Product. Is the final product or service delivered useful, acceptable and affordable to the intended users?

(3) Appropriateness of Process. Does the production process make economic use of inputs?

(4) Cultural and Environmental Appropriateness. Are the production processes, the products delivered, and the institutional arrangements compatible with the local environment and cultural setting?

In the end, the appropriateness of a particular technology to a particular country situation depends on so many factors that formal general definitions are of limited operational use.

APPENDIX F

APPLICATION OF APPROPRIATE TECHNOLOGY IN ADB ACTIVITIES

The applicability of AT to different sectors of economic activity would tend to be influenced not only by the characteristics of the concerned sectors but also by the circumstances of the country. However, keeping country considerations apart, it would seem possible to indicate, illustratively, how AT could apply in different areas.

The case of export-oriented activities may be dealt with first. The developing countries, particularly of this Bank, are in substantial shortage of foreign exchange resources and have to exercise maximum efforts at maintaining and improving their present exports and at achieving further diversification of their export activities. In common with developing countries in other regions, they face limitations of market access and cannot afford to overlook any method by which they could improve their competitive position in the international markets. To the extent that export-oriented activities need incorporation of latest cost-effective and quality promoting technologies, the countries concerned can hardly look for cheaper-probably less efficient-alternatives. In this context, it is necessary to remember that some of the developing countries are entering into a stage where their manufactured products have to compete with the products emanating from developed countries; in such cases, abridgement of the most efficient technology cannot be justified. In such circumstances, AT would be that which most favors the undertaking in marketing its products internationally.

Next would come the question of goods that are traded or marketed only, or to a predominant extent, domestically. The level of technology applicable in such cases would have to bear reference, inter alia, to the availability of similar imported goods, the domestic preference policy followed in the country, the acceptability of a certain degree of tolerance in the quality of the goods to be marketed, and the margin of tolerance as to the prices which the target population could afford to pay for the commodities concerned. The latter two perhaps need to be explained. If domestically marketed commodities have very high quality characteristics, as for instance may happen with the manufacture of pharmaceutical goods, or of precision materials, quality tolerance would be very limited and flexibility between possible alternatives of technology would consequently be limited. In the other case, if for instance, the use of labor-intensive methods would raise the cost of a commodity, the deciding factor would then be the margin of extra cost which would be within the capacity of the relevant consuming public to pay without adversely affecting the demand. Within these considerations, it would appear possible, particularly where the products are not of a sophisticated nature, to have considerable possibilities for substantial adaptations of technology.

In respect of infrastructure, it would seem that there is scope for considerable ingenuity in adapting technology to the requirements of a

---

Source: ADB, Appropriate Technology and Its Application in the Activities of the Asian Development Bank, Occasional Paper No. 7 (April 1977) pp. 15-17.

particular project in a particular country. As already mentioned, roadworks (whether national, provincial, or local) would lend themselves most readily to adaptations of specifications to suit the characteristics of projected traffic and to be labor-intensive in execution. Civil works projects of most types-prominent exceptions however being specialized works like tunneling or underwater activities-would need to be carefully scrutinized to minimize the use of heavy equipment (particularly specialized heavy equipment which may have limited subsequent use). However, in certain activities even in the field of infrastructure, the choice between advanced technologies and labor-intensive technologies may pose a dilemma: for instance, should a port be equipped with the most modern handling equipment so that ships may not be unduly held up (incurring heavy demurrages in foreign exchange) so that investments in the port could be put to maximum use or should labor-intensive methods be promoted? Such dilemmas would have to be dealt with pragmatically on a case-by-case basis.

In the field of public utilities, as for instance in generation, transmission, and distribution of electricity and in telecommunications, AT would have to take into consideration maximum utilization of local resources (e.g., locally available fuel or hydro-power for power generation rather then imported oil) and also the characteristics of local demand for the services concerned (a manual system of telephone exchanges could do at certain stages of development where the density and quality of traffic are limited). However, once the basic correlation to technology with natural endowments or demand factors has been made, there may be only restricted scope for choice or adaptations in the production stage: if 10 megawatts of power have to be produced, there would be no alternative to importation of equipment to suit that requriement. However, past the point of production, the distribution system (whether, for instance, for electricity or for water) can bear close examination for adaptive technology which would promote maximal use of locally available materials and manpower and would minimize maintenance problems.

In social services, including education, sanitation, medical services, etc., the field for close scrutiny for adaptive technology would seem to be very wide. The technology of education has to cater not only to the advancement of knowledge but also to the adaptation of that knowledge to be of practical relevance to the culture and environment of the educated. Though there can be, understandably, an expectation of high standards of sanitation and medical services, the strained resource position in developing countries, the dispersed nature of the population, and the relatively different receptivity of people (dependent inter alia on their literacy and the spread of education) would seem to call for flexible approaches to the standards and hence to the technology of sanitation and medical services. Deliberate judgments in the choice of technology in this regard would have to be arrived at in terms of the minimum requirements of sanitation and medicine vis-a-vis resources.

In the field of rural development, inclusive of agricultural development, there would seem to lie the greatest scope for adaptation of technology.

Whether one is concerned with building of dams, excavation of distribution channels, the processing of agricultural products, the making of agricultural implements, or with the training of rural population in various vocations (including cottage industries and agriculture), it would seem that infinite possibilities exist for innovative and adaptive technology.

APPENDIX G

DAC GUIDELINES

ON

LOCAL AND RECURRENT COST FINANCING

The Development Assistance Committee (DAC) of the OECD has agreed to introduce an important new element of flexibility in development co-operation financing policy by approving guidelines for recurrent cost financing to be included in the existing DAC Guidelines on Local Cost Financing, which were adopted at the 1977 DAC High-Level Meeting.

The term "recurrent cost financing" refers to the use of official development assistance for procuring goods and services (for example local personnel) required for maintaining and operating a given project or programme.

According to the new guidelines, DAC Members recognize that adequate external financing of recurrent costs may be necessary to ensure the successful completion, maintenance and operation of specified development projects/programmes; to encourage the selection of projects and techniques which make full economic use of available local human and material resources; and in this way, to contribute to productive employment and the satisfaction of basic human needs. With this in mind, DAC Members undertake to respond constructively to requests for recurrent cost financing assistance from developing countries, where this is essential to maintain and operate effectively particular development programmes and projects.

The full text of the DAC Guidelines on Local and Recurrent Cost Financing is attached.

DAC GUIDELINES ON LOCAL AND RECURRENT COST FINANCING

I. INTRODUCTION

1. DAC Members agree upon the importance of the positive contribution which local cost financing can make to the furtherance of several important objectives of development co-operation including the satisfaction of basic human needs. Agreement to engage in local cost financing:

   - can assist in building up local productive capacity;

   - can provide employment and a direct and immediate increase in the income of local populations as projects and programmes are implemented;

   - can relieve one of the absorptive capacity problems encountered frequently with the neediest countries by broadening the range of programmes/projects eligible for aid.

Source: OECD Press Release A(79)21, dated 3 May 1979.

Furthermore, donors recognize that it could be detrimental to the development efforts of recipient countries if good projects are not implemented as a result of the inability of the recipient to provide or obtain the funds required to cover local costs. For the above reasons donors undertake to provide adequate levels of local cost financing since the need for this type of assistance is likely to increase with emphasis on basic needs projects.[1]

2. Increased levels of local cost financing are most effectively accorded on a case by case basis after consideration of the development objectives of both the recipient and the donor country. It is therefore necessary for donors to maintain a flexible attitude towards local cost financing in order to avoid a situation where projects are automatically considered ineligible. In general, donors agree to take measures to meet shortfalls for developing countries which desire to promote programmes/projects with large local cost components but which, in spite of determined efforts, are unable to mobilize all the required resources internally.

3. In the process of fixing appropriate levels of local cost financing, DAC Members believe that the overall development objectives of the recipient country, its economic and social conditions, and the specific nature of the project or programme are important. A list of some of the important considerations appears below. The purpose of the list is to outline major points which could argue in favour of a decision to finance local costs. The points are not intended to provide a rigid framework for donor action nor are all of them likely to be applicable to every proposal which may be considered.

---

1. For the purposes of these Guidelines "Local Cost Financing"

   (a) refers only to financing through official development assistance;
   (b) refers to expenditures by means of transfers of freely-convertible foreign exchange for purchases of local goods and services needed for the implementation of projects or programmes;
   (c) may form part of the capital assistance or technical assistance components of projects or programmes or may be in the form of general budgetary support;
   (d) does not refer only to funds specifically earmarked for local cost financing but would include funds eventually used to finance local costs in those cases where the donor has expressed no preference as between local currency and foreign exchange components;
   (e) includes the financing of local costs through the use of counterpart funds generated by commodity import schemes when the primary intent of such financing is to generate local currency for development projects and programmes.

Furthermore the guidelines set out in this document are not designed to define limits to the flexibility with which DAC Members are willing to consider local cost financing. Individual donor countries are encouraged to liberalize their policies as much as possible.

II. CONDITIONS WITHIN THE RECIPIENT COUNTRY WHICH MAY MAKE IT PARTICULARLY APPROPRIATE FOR LOCAL COST FINANCING

4. The following points concerning the economic situation within the recipient are to be given close attention. Although each point does not have the same relevance for the final decision to finance local costs, donors agree that each of them is indicative of the country's potential need for external local cost financing:

   i. the degree of scarcity of resources in terms of the savings potential;

   ii. the degree of scarcity of resources in terms of fiscal base;

   iii. the level of under or unemployment;

   iv. the nature of the general development programme (especially the degree to which it is oriented to the satisfaction of basic human needs);

   v. the strain on the economy of the recipient which could be caused by increased demand for imports and inflation generated as a result of development programmes whose local costs are met from internal resources.

III. TYPES OF INVESTMENT PROGRAMMES/PROJECTS MOST SUITABLE FOR LOCAL COST FINANCING

5. The particular characteristics of the project/programme under appraisal are also an important element in the decision of when to finance local costs, and Members agree to pay particular attention to the considerations listed below when fixing levels of local cost financing. (It is understood that the characteristics listed are of varying significance and may not all be relevant to each project/programme that is proposed and that it may not be possible in every case to obtain accurate information).

   i. General

   - the priority given to the project/programme by both recipient and donor;

   - the degree to which the project/programme is geared to the satisfaction of basic human needs and is consistent with the objective of self-reliance;

- the assurance on the part of the recipient that if it obtains the desired local cost financing it will be able to provide the required goods and services locally.

ii. Uses of output

- the extent to which goods and services produced by the project/programme flow to the poorest sectors of the population and are directed to the satisfaction of basic human needs.

iii. Suppliers of local goods and services

- the impact of purchases of local goods and services on employment and income distribution.

iv. Technical characteristics of the project/programme

- the degree to which production techniques are consistent with the local/regional factor and resource endowment;

- the extent to which the social and economic costs of production are consistent with the recipient country's objectives;

- the degree to which the project/programme meets appropriate technical standards.

v. Economic

- the degree to which the project when completed will be independent of external assistance within a reasonable period of time in cases where the project itself may not be revenue generating (e.g., educational investment);

- the extent to which the secondary demand generated by the local expenditure can be met within a reasonable period of time;

- the degree to which the project/programme meets appropriate tests for viability.

6. For general budgetary support DAC Members may consider the overall composition of the budget to be financed by the recipient government, in the light of similar considerations to those outlined in the previous paragraph.

IV. THE FINANCING OF RECURRENT COSTS

7. DAC Members acknowledge that all development projects give rise to expenditures related to maintenance costs which normally are the responsibility of the country where the project is situated. DAC Members recognize that adequate external financing of recurrent costs[2] may be necessary:

   (a) to ensure the successful completion, maintenance and operation of specified development projects/programmes;

   (b) to encourage or, in any case, not to discourage, the selection of projects and techniques which make full economic use of available local human and material resources; and in this way,

   (c) to contribute to productive employment and the satisfaction of basic human needs.

8. With this in mind, DAC Members undertake to respond constructively to requests for recurrent cost financing assistance from developing countries, where this is essential to maintain and operate effectively particular development programmes and projects.

9. DAC Members will provide recurrent cost financing according to the merits of individual cases, taking into account such factors as:

   (a) the overall domestic financing capacity of the country, giving especially favourable consideration to requests from least developed and other countries with low domestic financing capacity;

   (b) the nature and degree of the constraints faced by the recipient country in meeting recurrent costs from domestic resources for the project/programme under consideration;

---

2. For the purposes of these Guidelines, "recurrent cost financing":
   (a) refers only to financing through official development assistance;
   (b) refers to financing needs arising from specified development projects/programmes;
   (c) refers to transfers of freely-convertible foreign exchange, or counterpart funds generated from commodity aid, for procurement of goods and services (including salaries of local personnel) required for maintaining and operating a given project/programme during and after completion of the initial financing;
   (d) does not refer to general budgetary support.

the financing of recurrent costs should, in particular, be used to support projects of real social or economic worth which normally, at least at the outset, do not generate sufficient receipts to cover these costs;

(c) the contribution of the project/programme under consideration to the effective use of local human and material resources and to the recipient's economic and social development;

(d) the jointly-assessed ability of the recipient to take on increasing shares of the recurrent costs of the projects/programmes under consideration over time, recognizing that it is not appropriate for either recipients or donors to prolong external recurrent cost financing over too long a period.

10. In accordance with the basic principle of long term self-reliance and in order to preserve the recipient's commitment to particular aid projects/programmes, DAC Members, in cases where they decide to participate in recurrent cost financing, will provide such financing for specified time periods with agreements for gradual takeover by the recipient. They recognize that the precise sharing of recurrent cost financing over time depends on various factors, including those set out in paragraph 9, and will endeavour to suit the phasing-out of recurrent cost financing to the needs of individual cases.

11. DAC Members will ensure that the recurrent costs of proposed projects and programmes, as well as the local and offshore investment costs, are jointly assessed and taken into account prior to the commitment of aid funds; that in determining the design of projects and programmes and the appropriate contributions of external and domestic resources, full account is taken of the scope for economic use of domestic resources including existing infrastructure; and that the projects and techniques chosen are consistent with the overall development objectives of the recipient country.

12. DAC Members agree to take any necessary steps to adapt their procedures and policies of recurrent cost financing as required by the preceding paragraphs.

V. REVIEW OF IMPLEMENTATION

13. Review of implementation of these guidelines will be undertaken as part of the DAC Aid Reviews.

APPENDIX H

UNDERFINANCING OF RECURRENT DEVELOPMENT COSTS

EXCERPTS:

Illustrative summary of the recurrent expenditure implications of projects as a proportion of investment expenditure across development sectors ("r" coefficients)[1]

Sector	"r" coefficient
AGRICULTURE	
Fisheries	0.08
Forestry	0.04
General agriculture	0.10
Livestock	0.14
Rural development	0.08-0.43
Veterinary services	0.07
BUILDINGS	0.01
EDUCATION	
Agricultural colleges	0.17
Polytechnic schools	0.17
Primary schools	0.06-7.0
Secondary schools	0.08-0.72
Universities	0.02-0.22
HEALTH	
District hospitals	0.11-0.30
General hospitals	0.183
Medical auxiliary training school	0.14
Nurses college	0.20
Nutrition rehabilitation unit	0.34
Rural health centers	0.27-0.71
Urban health centers	0.17
HOUSING	0.03
MANUFACTURING, COMMERCE, AND CONSTRUCTION	0.01
ROADS	
Feeder roads	0.06-0.14
Paved roads	0.03-0.07
SOCIAL AND RURAL DEVELOPMENT	0.04
TOURISM	0.05

Source: World Bank and IMF data.

1. These coefficients are drawn from a very restricted sample of developing countries and are meant to illustrate the variability one can observe across sectors and projects.

   Example: If a polytechnic school costs $1 million to construct and equip. on the basis of an "r" coefficient of 0.17, we can estimate that it would cost on average $170,000 in each subsequent year to pay the teaching staff, to operate the facilities, and to maintain the building.

Why does this problem persist?

The problem partly derives from the administrative structure common to the financial and sectoral ministries of developing countries which separates the investment and current budgeting functions.

In effect, the movement of a project from the investment to the recurrent budget signals its fall from "budgetary" grace a decline in its "visibility," and its need to scramble for a share of recurrent funds.

The myopia of planners is hard to understand. It may reflect the sheer absence of data on the recurrent expenditure implications of projects, the planners' own preoccupation with the realization of new investments, their macro-economic policy focus, or their neglect of the impact of underfinancing on future productivity. Certainly the literature on planning and project evaluation offers little guidance on how to deal with this problem. By definition, a project with an acceptable social rate of return has a stream of present value in excess of its social costs. The possibility that scarce recurrent budgetary resources might jeopardize a project's future output is rarely incorporated in the project evaluation process.

Solutions

If a country's existing public capital stock is grossly undermaintained or operating inefficiently, or if such problems are likely to emerge in the future, there are at least seven policies the government can adopt to ensure consistency between the level of future recurrent expenditure and revenue. At a macro-economic level, it could (1) restructure its public expenditure program by reallocating funds from the investment to the recurrent budget, perhaps diverting funds to the maintenance and operation of existing programs; (2) cut less essential recurrent expenditure; (3) increase the tax effort of the public sector; and (4) increase the elasticity of the tax system.

At the project selection level, the government could (5) change the composition of the investment program to favor programs or investments with lower recurrent expenditure implications; (6) modify the technology of projects to have higher present investment costs at the expense of lower future recurrent outlays; and (7) introduce fees for the use of project services. The World Bank has emphasized that reliance on user charges should be extended from the traditional sectors of power, water, and transport to irrigation, agricultural credit, and urban sites and services schemes. Even in such social sectors as health and education, a modest reduction in the subsidy for some services may be appropriate. In many cases, user charges extend the potential coverage of important socioeconomic programs.

Such an approach would have several advantages. It would ensure that recurrent costs are fully considered in the design and evaluation of projects, it would provide detailed data to budget planners, and it would ensure that an adequate level of recurrent funding for a project is built

into a sector's budget. Once the project is fully operational it would then be more resilient to cutbacks when its funding is transferred to the local budget. By providing external technical assistance in the operation of the project, the donor could augment the absorptive capacity of a country in operating its projects. Finally, such a policy would also imply a productive shift in external aid funds from the investment to the recurrent budget.

Source: Peter Heller, "The Underfinancing of Recurrent Development Costs," Finance and Development (March, 1979) pp. 38-41.

APPENDIX I

GENERAL PRINCIPLES OF PROJECT APPRAISAL

INTRODUCTION AND SUMMARY

General

1. The starting point for any system of project appraisal must be an examination of objectives and alternative means of achieving them. Project appraisal should not be regarded as a separate and final stage in the development of a project, to be undertaken when it is fully worked out. That this mistaken impression should have such wide currency can be attributed, in some measure at least, to the way in which external finance for development has sometimes been provided, involving the submission of fully documented project proposals which are then "appraised" in some sense by the agency providing the funds.

2. It is the responsibility of agencies providing development finance to take such measures as they deem appropriate to satisfy themselves that the purposes for which funds are provided make sense from a broad economic point of view. However, project appraisal should not be regarded merely as one of the techniques for doing this. Rejection, or substantial modification of projects after a great deal of resources have been invested in investigating them can clearly lead to frustration and waste. The general principles for project analysis set out here should be applied at all stages of project selection and analysis, from the first preliminary identification of a possible investment to the preparation of detailed designs. The careful preparation of terms of reference for consultants engaged to carry out feasibility studies is of particular importance in this connection.

Valuation of Costs and Benefits

3. The valuation of social costs and benefits presents a number of problems which are not encountered by the private investor who need only concern himself with the stream of costs and benefits as they affect his enterprise. Social cost-benefit analysis is concerned with the effects of the project on the economy as a whole. This raises several problems: the appropriate prices for inputs and outputs, the valuation in monetary terms of the output of certain services and the valuation of indirect effects or "externalities" in the language of economists.

4. In a highly developed competitive market economy the relative prices of goods and services normally provide a fair approximation to the relative costs to the economy of producing them. Divergencies may indeed arise between the costs to the enterprise producing a particular commodity and costs to society

Source: Overseas Development Administration, A Guide to Project Appraisal in Developing Countries (London: 1972) pp. 1-6, 27-28, 42-50.

at large but these are normally considered exceptional and are dealt with by public policy; for example regional wage subsidies are designed to reflect differences in the cost of employing labour in different parts of the country.

5. In less developed countries prices of goods and services prevailing in local markets often provide a much less reliable guide to their costs as far as the national economy is concerned for two broad groups of reasons. The widespread adoption of extreme measures of protection combined with an acute scarcity of foreign exchange in many developing countries produces very serious distortions of the internal price structure; and the existence of a large pool of unemployed labour combined with labour market rigidities often means that wage rates do not properly reflect the cost to the economy of employing additional workers.

6. The method used to deal with the problems which arise in economies which are, in large measure, insulated from the world economy so that relative prices fail to reflect social opportunity costs when the possibilities of international trade are taken into account, is based on the OECD Manual. The general principle is to value commodity inputs and outputs at international border prices excluding the effects of domestic tariffs, subsidies and excise taxes. This is conceptually simple for commodities traded internationally, particularly those which the country in question imports or exports in sufficiently large amounts to enable reasonably reliable values at international border prices to be established, but in practice considerable difficulty may arise.

7. It has already been pointed out in the Preface that the purposes of using international or border prices in the appraisal is to indicate the objective possibilities for transformation between domestic and foreign resources. An economy forfeits income if it produces a product domestically which it could procure from abroad at lower real cost, properly measured, by producing exports instead. Only if these possibilities are fully reflected in investment decisions will an economy achieve the maximum possible growth of income (and hence consumption) which is the underlying assumption of this method of project appraisal.

8. There are however many goods and services which are not traded in the sense of not normally being exported or imported, such as power, internal transport and construction. As non-traded goods have tradable goods incorporated in them in varying proportions, some method must be found of valuing tradable and non-tradable goods on a consistent bases.

9. The application of these principles involves first a judgment as to the appropriate boundary between traded and non-traded

goods. An important consideration here is the nature of the foreign trade regime in operation in any particular country and the likelihood of its changing over time. Secondly, operational judgments have to be made as to the amount of professional staff time it is sensible to devote to establishing values for non-traded goods and services. The main question is the level of aggregation at which it is sensible to operate, bearing in mind that the higher the level of aggregation at which adjustments are made the less accurate are likely to be the results for any particular commodity. Evidently, resources are best applied to those items likely to have a significant effect on the appraisal, others being dealt with by more aggregative corrections. In this connection the possibility of a collaboration between economists and statisticians in developing a consistent system of accounting prices for any particular country for general use in project appraisal could fruitfully be explored.

Labour Costs

10. The cost to the economy of employing a worker on a new investment project is the output which is lost as a result of his leaving his previous occupation and in certain circumstances the higher consumption resulting from the change of job. Where that occupation is agriculture and where, as is usually the case in developing countries, labour productivity is very low, it is probable that the wage rates payable will be in excess of the true costs to the economy of employing workers. This is because wage rates are determined by a whole host of factors and not simply by marginal productivity in the alternative occupation. In cases where there is a large pool of unemployed workers the cost of additional employment in terms of output foregone elsewhere may be near to zero. In these circumstances the effects on aggregate consumption of taking on additional workers at the actual market wage will be a major consideration in establishing the shadow wage.

11. There are, however, a number of points of a general character which need to be emphasized in relation to the establishment of the shadow wage. First the determination of the shadow wage is partly a matter of public policy. It involves a consideration of the value attached to consumption by particular groups of the population and the distribution of that consumption through time.

12. Secondly, it is important that a general view be formed as to the appropriate Shadow Wage Rate; exceptions should be admitted with considerable caution. Distortions could arise if different Shadow Wage Rates are applied to different projects in the same area and covering the same time period. It may of course be desirable to apply different Shadow Wage Rates in different parts of a country as a deliberate part of

regional policy, but there should be a consistent approach for similar types of project in the same region.

13. Finally it is important that the appropriate shadow wage be used at the earliest stage of project identification and selection, for it is at this stage that it is likely to be most relevant in determining the choice and design of investments to be undertaken.

Income Redistribution

14. Project selection will influence the distribution of income through the location of projects and through the employment generated by them. Central authorities who wish to redistribute income may be unable or unwilling to use fiscal measures to do so. They may wish deliberately to influence income distribution through project choice--"employment" objectives usually amount to this.

15. To the extent that the opportunity cost of labour in the sense of output foregone elsewhere is used as a basis for costing labour when making investment decisions, income will probably be redistributed in favour of low income workers more effectively than if market wage rates were used in appraising investments. However, redistribution of employment towards particular groups or regions may mean that future consumption must be foregone by the whole of society. This is a matter for public policy and it is for the central authorities to clearly specify the "weight" to be attached to the income and consumption of some particular favoured groups which may often mean those living in a particular region.

Externalities

16. A new project may have external effects. These are net costs or benefits for the whole economy which depend on the execution of the project under consideration but which are not taken into account in the quantities or prices of inputs and outputs of the project itself. These effects are mainly of two kinds: multiplier effects which result from the expenditure of the incomes generated by the project and linkage effects which are the increases in income generated by the additional activity occasioned by a project in industries which supply its inputs and process its outputs.

17. Great store has been set in the past on these linkage and multiplier effects [illegible] there is reason to believe that socially unprofitable projects have been justified as a result. The approach is a conservative one but it ensures that any demonstrable secondary benefits from a project are fully taken into account.

Cash Flow Analysis

18. The general principles for social cost benefit analysis enable assessments to be made of the impact of any project on the national economy. However, though the analysis is carried out

in terms of accounting prices the project will have to operate in a world of actual prices. It is the function of the cash flow analyses to examine the practical implications for the operation of the project of the shift from accounting prices to actual prices.

19. The use of accounting prices as distinct from the prices which the enterprise will actually have to pay may mean that the cash flow may be inadequate. For example if a Shadow Wage Rate is used the actual wages bill will be larger than that appearing in the project analysis and some financial adjustment may be required if the project is to operate in a market context. The extent to which this may be necessary will depend upon how far the set of accounting prices used in the appraisal diverges from market prices.

20. Difficulties can also arise from the fact that the terms on which a project is being financed and the way the cash flow develops through time may lead to liquidity problems. Such problems have to be taken into account in relation to the capital structure of the project. They are also relevant when the terms of finance for the project are being considered; for example when concessional finance available to the central government is being on-lent.

Time and the Discount Rate

21. The appraisal of investment projects involves adding up the costs of executing and operating any project and comparing this with the value of the expected benefits. Costs and benefits are dispersed through time, however, and this raises two problems. First, how to bring into a common measure costs and benefits occurring at different future dates. Second, the period of time over which it is sensible to consider costs and benefits.

22. The problem of time in any system of project analysis is dealt with by a discounting procedure which will enable costs and benefits occurring at different points in time to be expressed in terms of present values. The Net Present Value is the difference between the total of the discounted costs and the total of the discounted benefits. It should be emphasized, however, that the choice of discount rate lies at the heart of economic policy.

23. Although in principle these methods are applicable to all types of projects, in practice certain projects present greater problems than others. Industrial projects present the least difficulties. Inputs and outputs are more reliably predictable than in other fields. In the case of health and education investments (hospitals and schools for example) it is particularly difficult to value the non-tradable output. It is suggested that in these cases a procedure of cost-minimization be followed when the objectives of the projects have been specified. In the case

of agricultural projects the proportion of non-tradable outputs and inputs is higher than for industrial projects and because they are likely to be more labour intensive they are more sensitive to the shadow wage rate used. Moreover, there is likely to be more serious problems of interdependence in the case of irrigation and land settlement projects than in the case of industrial projects which can usually be considered in isolation.

24. It would be wrong to think of these principles as a set of rules to be applied mechanically. It is a framework of analysis designed to ensure a systematic and consistent approach to the problems of project appraisal. It is for those who are applying the principles to exercise their own judgment in the light of public policy as to how and how far they are to be applied in particular cases. It is important, however, that such judgments be mutually consistent, for otherwise the important benefits from the point of view of resource allocation to be derived from the use of these techniques will not be obtained.

GLOSSARY OF TERMS

Accounting Rate of Interest (ARI)	The Discount Rate; the opportunity cost of capital; the rate by which the project's annual costs and benefits are discounted to produce the project's Net Present Value.
Accounting Prices	The social value of a good or service; the opportunity cost of a good or service; sometimes referred to as the Shadow Price.
Appraisal	The examination of a project <u>before</u> ("ex ante") the project is undertaken.
Cash Flow	The costs and benefits of a project measured in terms of actual market prices (not accounting prices) that accrue directly to the project (i.e., not to the whole economy). Usually involves the estimation of the money returns to the various interests involved in the project and the need for some financial adjustment (such as a government subsidy).
cif	Carriage, Insurance and Freight; the import price of a good (or service) which includes these costs.
Conversion Factors	The short-hand means by which non-traded goods (see below) can be valued in terms of world prices; the ratio of the true accounting price (the world price or value in terms of foreign exchange) to the domestic market price (usually less specific excise and purchase taxes); can be estimated

	for single commodities, for whole sectors or for the whole economy (this latter case will be the inverse of the shadow foreign exchange rate).
Discount Rate	(See Accounting Rate of Interest, above.)
Evaluation	The examination of a project after ("ex-post") the project has been undertaken. (See also Appraisal, above.)
External-ities	The net costs and benefits for the economy which depend on the execution of the project under consideration but which are not taken into account in the quantities or prices of inputs or outputs of the project itself. (See also linkages, multiplier effects below)
fob	Free on Board, the export prices of a good (or service) including transport, etc. to the domestic point of departure (border, port or airport). (See also cif above.)
Linkages	"Forward" linkage effects are "externalities" (see above) occurring in "industries" which process or use the project's outputs. "Backward" linkages are "external effects" which occur in "industries" which supply inputs to the project.
Multipliers	These are externalities (see above) in the form of short-run increases in income generated when surplus capacity in an economy is activated by additional rounds of spending resulting from the expenditure on a project.
Non-tradable Goods or Services	Goods or Services which are not imported or exported and would not be imported or exported even if the country had pursued policies which fully took into account the possibilities of trade (i.e., the country's long-term comparative advantage). Traded goods which are temporarily in surplus supply might also be considered non-tradable.
Opportunity Cost	The value to society of a good or service in its best alternative use. (See also Accounting Prices above.)
Sensitivity Analysis	The process by which a project's Net Present Value is sensitive to changes in the value of selected variables in the cost-benefit analysis.
Shadow Prices	(See Accounting Prices, above.)
Shadow Wage Rate (SWR)	The Accounting Price of labour. The cost to society of using labour; usually expressed as a fraction of the market wage rate.

Tradable Goods and Services	(See Non-Tradable goods above). Goods and Services which are either actually imported or exported and domestically produced goods which would have been imported or exported if the country had followed policies which fully took into account the possibilities of trade (i.e., their long-term comparative advantage).

CHECKLISTS:

ECONOMIC, MANAGEMENT AND FINANCIAL ASPECTS

A. Economic Aspects

1. Consideration of objectives and alternatives

   i. What are the principal economic objectives of the project?

   ii. What alternative ways of achieving these objectives have been considered and rejected? Give a summary of those alternatives and why they were rejected.

   iii. Are there any alternatives which are still unresolved, e.g., as between different methods of achieving the output aimed at? Details of such alternatives should be given. Some indication should also be given of what alternatives remain if the project is rejected, e.g., if the project is to help small farmers in a poor region what alternative means are open if the present project is rejected?

2. Annual inputs and outputs over the life of the project

   i. Show the annual construction costs, operating costs and receipts, for each year of the project's life (or to that point where an unchanging pattern is achieved) at present-day prices except as indicated below. The rest of this check-list gives guidance on information required on particular input and output items. State whether the "eternal" or an limited life (see note below) is being adopted--if the latter state the number of years. Use the same currency throughout.

   Notes:

   a. <u>The life of the project</u> Sometimes it is convenient to assume that life is "eternal". In this case (a) sufficient replacement and improvement inputs should be allowed to render it not only "eternal" from a technical point of view, but also "eternally" competitive; and (b) inputs and outputs need then be estimated only up to the date when they assume an unchanging pattern, thenceforth the same net flow per annum can be assumed,

it should be stated whether this is derived from normal private depreciation procedures, from experience as to how long such projects have in fact operated, or from some assumption about the prices of inputs or outputs which will make the project uneconomic to operate after a certain lapse of time. In any event, a terminal or "scrap" value should be given.

b. Investment and operating costs. Where the project is such that a clear construction period, followed by an operating period, can be distinguished, then the costs of construction and equipment should be separated from the operating costs, and be called "investment" costs. Major replacements in later years should then be included as investment costs under the year in which they occur. In some cases where substantial investment is likely to go on year after year (as in some agricultural projects) and the initial investment is small relative to operating costs, or the gestation period is very short, there is no need to try to separate investment from operating costs.

c. The time profile. When full capacity working is expected to obtain immediately the operating period is reached, and to be maintained for the life of the project without major replacements, then it is sufficient to record the quantities and prices of the inputs and outputs for a single year's operation. But, generally, a running-in period (after the construction period) is needed before full capacity working can be expected, even when there is ample demand to sustain full capacity working. In many cases also, e.g., an airport, full capacity working may not be required for a long time. In such cases the rate of increase of demand must be estimated, in order to provide a time-profile of the project's operation.

d. Prices. All prices tend to change as a result of inflation. But inflation should not be allowed for. The general price level should be assumed to be constant from the time the first expenditure on the project is made. But this does not mean that a few prices of importance to the project may not have to be assumed to change relative to the general price level. An obvious example is that it would be absurd to take the expected price of an output such as rubber as identical to that which happened to rule on the date the report was written. Another example is that it is often correct to assume that the price of an industrial output will fall as new techniques evolve. A particularly large project may itself cause price levels to change and such changes should be allowed for. What is most important, however, is that the report makes clear what has been assumed about changing prices, and why.

e. Sensitivity and risk. The estimates of the values of inputs and outputs should be the "expected values". The degree of risk of each items will vary, and in the case of the most important items it is helpful, in assessing the overall riskiness

of the project, to have an indication

(a) of the range of possible values that the important cost or output items might take (and a rough indication of probabilities--probably these can be little more than intelligent guesses), or

(b) of "reasonably optimistic" and "reasonably pessimistic" values on either side of the "expected" value.

As a guide to (a) the following shows the form in which the figures might be presented:

Range of possible values (£)	15	17	19	21	23	25	27	29
Estimate of probability (%)	10	15	20	25	15	10	3	2

For the few items for which such a treatment is appropriate the expected value should be obtained by weighting each figure in the range by its probability (e.g., £15 x 10, £17 x 15, etc.) and dividing the sum of these by 100. In this example the expected value is £20.45. As a guide to (b) above, the range indicated might account for three-fifths (60%) of the likely values the variable could take.

Attention should also be drawn to any features, on the input or output side, to which the success of the project is particularly "sensitive". For example a metal industry may require a small supply of a particular metal the absence of which might bring the whole factory to a halt, or the output forecast may depend heavily upon the continued availability of a particular marketing outlet. The project submission should indicate what steps have been taken in the design of the project to minimize the risk of things going wrong.

Attention should also be drawn to cases where items are likely to vary together, either in the same or opposite directions, e.g., a lower volume of sales than expected maybe made at a higher price or a relative rise in labour costs may imply that labour-intensive inputs will also rise in price.

Finally, consideration should be given to the degree of variation which may be possible in such things as the date of completion of the construction phase and the average capacity level of working assumed in subsequent stages.

f. Contingency allowances. These should not be used to introduce any systematic optimism or pessimism into the estimates: Always show allowances separately and indicate what the allowance is intended to cover.

3. Information required on particular inputs or outputs

   a. Land

      i. For what purpose is the land required for the project being used at present, and what is its value?

      ii. For what purpose will the land be used in the project and what will be its value (in price or rental terms) in its new use?

   b. Labour

      i. List the probable numbers, and average earnings, of the following categories of workers:

         a. unskilled
         b. skilled
         c. highly skilled, technical or managerial
         d. expatriate (exclude from a-c)
         e. non-hired (i.e., farmers; give their estimated imputed earnings).

      ii. Indicate the supply position of each category, e.g., there may be an abundance of unskilled labour combined with a shortage of skilled workers. If possible give an estimate of the level of unskilled earnings (or imputed earnings for agriculturalists) in alternative occupations.

   c. Materials and components

      i. Give the estimated value, by price and quantity, of the main items.

      ii. For each item specified state, if possible, whether it is to be directly imported or purchased within the country. If known give the cif price and the appropriate tariff even if the item is locally purchased (in the latter event it might be the tariff on a closely comparable imported item. If items are imported the amount of internal transport cost included in the delivered price should be given. If the price includes any indirect taxation (or subsidization) the amount of this should be given. If any industries supplying materials for the project have surplus capacity a note to this effect should be made.

d. Work contracted out

Where work is contracted out, it may not always be possible to give full details of the labour, materials, etc. used by the contractor, but the following information should be given:

a. expected payments for the contracted work;
b. a general description of the work;
c. whether the contractor is a foreign firm or subsidiary, or a local firm;
d. any other information available on the kind of contracting firm (e.g., small or large-scale), and its operations.

e. Fuel and power

Give details of purchases of electric power and, if possible, the tariff rates of the supply system. If there is any excess capacity in the supply system this should be indicated. (Oil, coal, etc. can be included under Materials.)

f. Transport

Give direct payments for transport separately for major items if possible. Estimates of the internal transport cost included in the price of major items of equipment or materials are also useful.

g. Working stocks and spare parts

Give the build up of stocks which occurs during the initial investment period, and the stocks required once the project is in operation. (These items of working capital should not be forgotten as they sometimes are.)

h. Other expenses

Give an estimate of total Other Expenses, which should include:

a. advertising
b. insurance
c. bank charges
d. general overheads e.g., postage and telephones
e. legal fees.

Note:

Usually these will not be important enough to warrant separate detailing, but if any item bulks large details should be given, especially if the cost is in terms of foreign exchange.

An example might be payments to a foreign company for knowhow or licenses. Consulting engineers' fees and design costs should always be shown separately.

Do NOT include in this section interest on loans or capital repayments or depreciation; these are covered later under the Financial Aspects.

i. Valuation of output items

i. Give the estimated value by price and quantity of the main items (aim to cover at least 80% of the value of sales if possible).

ii. For each item, state whether directly exported or sold within the country. If known, give the fob price and any export subsidies, and the internal transport cost from the port. If not directly exported give this information for a closely comparable exported product. Receipts will normally be given net of indirect taxation but the rate of tax should always be given.

iii. Comment on any indirect or non-quantifiable benefits; also indicate whether the price to be charged understates the amount which consumers will be willing to pay.

j. External effects

Specify the nature and size of any effects which are peculiar to the project under consideration. A definition and approach to valuation is given in paragraphs 51-58 of the Guide. Care should be taken to examine all the ramifications of the project and particular attention should be given to:

a. effects on the environment
b. effects on attitudes (including the effects of "learning-by-doing")
c. effects on the distribution of income, employment and political power
d. effects on industries involved with the inputs and outputs of the project.

B. Management Aspects

1. Who will supervise (a) the construction, and (b) the operation, of the project, and what is the length and nature of their experience on projects of this kind?

2. What degree of autonomy will the managing authority have?

3. Are adequate trained supervisory and technical staff available, and if not what additional staff will be needed and what arrangements have been made for their training?

C. Financial Aspects

The economic data in A, will enable a cost-benefit analysis to be made. However, the following information is also needed for the financial analysis which is concerned with the sources of capital, the returns to capital and the year by year liquidity position.

a. How much capital will be needed and from which sources?
b. What will be the annual interest payments, repayments of capital, and depreciation provision?
c. What are the pre-tax and after-tax profits expected to be, and how will these be distributed between the sources of capital?
d. What effect is the project likely to have on the budget of the country, and has the appropriate provision been made?

BUILDING AND CONSTRUCTION ASPECTS

Although the buildings associated with different projects will of course be of many different kinds, they have so many features in common that it is convenient to have one check-list to cover the building aspects of all projects. There will still be aspects of specialized buildings, such as airport terminals, hospitals, etc. about which further questions are asked in the relevant check-lists.

The type of information required to appraise the building component of a project varies with the nature and size of the project. The following two schedules set out the data required for the small and medium-sized projects. For the larger projects more details may be required.

i. Project description

Give a brief description of the project and list the buildings therein showing the overall area of each measured over external walls.

ii. Building materials

Indicate which building materials to be used on the project will be of local origin and supply and of foreign origin and supply.

iii. Estimates of cost

Provide the estimated cost for each of the following items, and indicate whether the work will be undertaken by contract or by direct labour:

1. Each building in the project, including all fixtures and fittings forming part of the construction programme (e.g., built-in cupboards, science benches, etc. including all such items covered by provisional sums).

2. Loose furniture, if provided.

3. External works (e.g., site development, access roads).

4. Public utilities and services (e.g., water and electricity supplies).

5. Sanitation outside the buildings.

6. Abnormal items (e.g., excessive requirements for underbuilding).

7. Other expenses such as professional fees.

8. Contingency sum.

9. Estimated cost by component.

iv. Consultants

1. If the work is to be designed and/or controlled by consultants indicate whether any particular firms are preferred and state which sections of the project are to be covered by their services.

2. Say whether a technical brief has been prepared, professional advice taken or a feasibility study undertaken for the project.

v. Contractors

If the construction is to be undertaken by contract it may be necessary to specify whether:

1. A local contracting company (i.e., a company indigenous to the country) is likely to be the successful tenderer?

2. Foreign contractors (i.e., non-indigenous) will submit tenders for the project or a part of the contract?

3. Foreign sub-contractors will be employed?

vi. Alternatives

What alternative methods have been considered, e.g., sites and services for occupier construction, industrial building techniques, etc.?

vii. Supplementary information

The information listed above will usually be adequate for a decision to be taken in principle, but the additional informa-

listed in Schedule B may still be required at a later stage for further appraisal of the project.

These additional details will usually be required to enable an appraisal to be made on projects with a capital value in excess of £10,000. This information may be useful also for schemes of a complex nature where the total value may be less than £10,000; projects in this category might include laboratories, extensions to hospitals, etc. where complicated services, planning or structure may require further appraisal.

Provide:

1. Site plan showing proposed development of building and environs.

2. Sketch design showing plans elevations and sections of all buildings to a scale of not less than 1/16th inch to 1 foot or 1:200.

3. Specification. The minimum information should provide details of the materials to be used and could take the form of annotated drawings.

APPENDIX J

DISTORTIONS, EFFICIENCY AND SOCIAL PRICING, AND PROJECT ANALYSIS

Distortions

The term 'distortion' is generally used to describe any phenomenon which causes the equivalence of 'marginal social value (MSV)', 'marginal social cost (MSC)' and market price to breakdown. It should not be taken to have any necessarily normative significance in itself. Such phenomena might originate in the foreign trade sector, or the domestic sectors of the economy such as the existence of monopolies, or generally speaking in the factor markets, namely, for labor and capital.

For in-depth treatment of these issues, see Deepak Lal, Methods of Project Analysis (Baltimore: Johns Hopkins University Press, 1974).

Efficiency and Social Pricing

When theorists attempt to derive, and practitioners attempt to estimate, 'shadow prices' that would reflect the true value of inputs and outputs to society better than market prices, they assume that at the margin all units of income are equally valuable from the economic growth point of view, thus ignoring the 'equity' objective. Such shadow prices are referred to as 'efficiency prices.'

On the other hand, 'shadow prices' that investigate the impact of projects not only on the distribution of income between consumption and investment but also on the distribution of income between the rich and the poor are referred to as 'social prices'.

Context of Project Analysis

All countries, but particularly the developing countries, are faced with the basic economic problem of allocating limited resources such as labor at all levels of skill, management and administrative capacity, capital, land and other natural resources, and foreign exchange, to many different uses such as current production of consumer goods and public services or investment in infrastructure, industry, agriculture, education, and other sectors. These different uses of resources, however, are not the final aim of the allocative process; rather, they are the means by which an economy can marshal its resources in the pursuit of more fundamental objectives such as the removal of poverty, the promotion of growth, and the reduction of inequalities in income. Using limited resources in one direction (for example, investment in industry) reduces the resources available for use in another direction (investment in agriculture). Pursuit of one objective (better income distribution) may involve a sacrifice in other objectives (rapid growth).

Source: L. Squire and H. Van der Tak, Economic Analysis of Projects (Baltimore: Johns Hopkins University Press, 1975) pp. 1-18.

Thus, there are clearly tradeoffs: a country can have more of some things and less of others, but not more of everything at once. A choice therefore has to be made among competing uses of resources based on the extent to which they help the country achieve its fundamental objectives. If a country consistently chooses allocations of resources that achieve most in terms of these objectives, it ensures that its limited resources are put to their best possible use.

Project analysis is a method of presenting this choice between competing uses of resources in a convenient and comprehensible fashion. In essence, project analysis assesses the benefits and costs of a project and reduces them to a common denominator. If benefits exceed costs--both expressed in terms of this common denominator--the project is acceptable: if not, the project should be rejected. As such, project analysis may appear divorced from both the fundamental objectives of the economy and the possible alternative uses of resources in other projects. The definition of benefits and costs, however, is such that these factors play an integral part in the decision to accept or reject. Benefits are defined relative to their effect on the fundamental objectives; costs are defined relative to their opportunity cost, which is the benefit forgone by not using these resources in the best of the available alternative investments that cannot be undertaken if the resources are used in the project. The forgone benefits are in turn defined relative to their effect on the fundamental objectives. By defining costs and benefits in this fashion we try to ensure that acceptance of a project implies that no alternative use of the resources consumed by this project would secure a better result from the perspective of the country's objectives.

Economic analysis of projects is similar in form to financial analysis in that both assess the profit of an investment. The concept of financial profit, however, is not the same as the social profit of economic analysis. The financial analysis of a project identifies the money profit accruing to the project-operating entity, whereas social profit measures the effect of the project on the fundamental objectives of the whole economy. These different concepts of profit are reflected in the different items considered to be costs and benefits and in their valuation.[1] Thus, a money payment made by the project-operating entity for, say, wages is by definition a financial cost. But it will be an economic cost only to the extent that the use of labor in this project implies some sacrifice elsewhere in the economy with respect to output and other objectives of the country. Conversely, if the project has an economic cost in this sense that does not involve a corresponding money outflow from the project entity--for example, because of environmental effects or subsidies--this cost is not a financial cost. The two types of cost need not coincide. Economic costs may be larger or smaller than financial costs. Similar comments apply to economic and financial benefits. Economic costs and benefits are measured by "shadow prices" which may well differ from the market prices appropriate for financial costs and benefits.

1. The definition of "financial analysis" used here represents only one of several concepts of financial analysis, all of which have their specific purposes.

Shadow prices are determined by the interaction of the fundamental policy objectives and the basic resource availabilities. If a particular resource is very scarce (that is, many alternative uses are competing for that resource), then its shadow price, or opportunity cost (the foregone benefit in the best available alternative that must be sacrificed), will tend to be high. If the supply of this resource were greater, however, the demand arising from the next best uses could be satisfied in decreasing order of importance, and its opportunity cost (or shadow price) would fall. Market prices will often reflect this scarcity correctly, but there is good reason to believe that in less developed countries imperfect markets may cause a divergence between market and shadow prices. Such divergences are thought to be particularly severe in the markets for three important resources: labor, capital, and foreign exchange.

Resource availabilities, however, need not be the only constraints operating in the economy: political and social constraints may be equally binding. The alternatives open to the government in pursuing its development objectives can be limited by these noneconomic constraints to a narrower range than that implied by the basic resource availabilities. If the tools of general economic policy--that is, fiscal and monetary policy--cannot break these constraints, project analysis should take account of them by means of appropriate adjustments in shadow prices. For example, if the government is unable to secure a desired redistribution of income through taxation, it can use the allocation of investment resources as an alternative method of redistributing income. If in project analysis higher values were to be attached to increases in income accruing to the poorer groups within society, investment would be biased in favor of these groups. In other words, all available policy tools should be working jointly toward the same goals. If one instrument is inoperative or blunted, other instruments may be used to achieve the same end.

Project analysis is designed to permit project-by-project decision-making on the appropriate choices between competing uses of resources, with costs and benefits being defined and valued, in principle, so as to measure their impact on the development objectives of the country. In many cases, however, a more direct link is necessary with the sector and economy as a whole: for example, the merit of a project characterized by economies of scale cannot be judged without making an estimate of the demand for its output, and this in turn requires placing the project in its sectoral and country context.

Furthermore, in practice, many shadow prices (for land and natural resources, for example) are difficult to determine independent of the project appraisal process, because they depend on the alternative projects that have been rejected. This is the basic reason why a systematic scrutiny of plausible alternatives is at the heart of the appraisal process: it is not sufficient in practice to select an acceptable project whose benefits appear to exceed costs; it is necessary to search for alternatives with a larger surplus of benefits over identified costs. If such projects are found, it means that the opportunity cost of using, say, land in the project originally considered acceptable has been underestimated or wholly neglected.

Consideration of alternatives is the single most important feature of proper project analysis throughout the project cycle, from the development plan for the particular sector through identification to appraisal. Many of the more important choices are made at early stages when decisions are made concerning the alternatives that are to be rejected or retained for further, more detailed study. If economic analysis is to make a maximum contribution to the attempt to ensure that scarce resources are used to best advantage for the country, it should be used from the earliest phases of this process of successive sifting and narrowing down of options that are open to the country. The use of shadow prices reflecting basic policy objectives and resource constraints only in the final stage of appraisal, when most of the essential choices with respect to types of project and project design have already been made, tends to be mainly cosmetic. To be an effective aid in decisionmaking, shadow prices should also be used in framing sector strategies and in identifying promising project possibilities and designing their major features.

APPENDIX K

USAID HANDBOOK

GUIDELINES FOR MANAGERIAL/ADMINISTRATIVE ANALYSIS OF PROPOSED PROJECTS

A. A critical element in development projects is the organization (or organizations) which will be responsible for implementing project activities. AID experience indicates that erroneous assumptions about project organizations and management/administrative factors have been a major cause of failure or lack of complete success of many development projects. A full and frank analysis of the managerial administrative environment can contribute to reducing this problem through: (1) Avoiding the initiation of projects where the managerial capability of the implementing organization(s) is inadequate to satisfactorily implement the project, or (2) provide meaningful timely assistance to overcome the identified administrative problems. While (2) is to be preferred, if there are management/administrative problems, in some situations the impediments are such that they cannot be resolved through foreign assistance, and, the project must be abandoned.

B. Timing of Administrative Analysis

1. As particular sectors of emphasis are identified in the Development Assistance Program (DAP) and sector assessments are prepared, these assessments should cover the administrative capability of the leading organizations in the particular sector. These assessments should provide a sound and adequate basis for the analysis of the administrative organizations identified for implementation responsibilities.

2. Improvements in administrative capabilities normally require substantial time, so it is normally unreasonable to expect that significant inadequacies can be corrected in the time between submission of the Project Identification Document (PID) and execution of a project. *However*, there is adequate time for addressing particular elements which may be identified as needing improvements. Actions to improve administrative competence should be initiated either prior to submission of a PID or during the project development process, and should not be delayed until project authorization. However, where improvements require AID assistance, this may be provided for in a prior project or in the first phases of the project being developed.

C. Elements of Analysis

In assessing the administrative capability of an organization it is important to look at several different elements. These include leadership, commitment, structure, resources, outside administrative environment, and grass roots managerial considerations.

1. Leadership

In most cases the development project is proposed by the host country or institution because of a recognition of a problem or need by the leadership in a particular organization at a particular time. In many cases the leadership is articulate and convincing as to the appropriateness of the need for devoting additional resources to solving a specific problem. It is important, however, to look both backward and forward as to capabilities and source of prior leadership and the probability of continuity of the current leadership. In many situations the tenure of leadership is short and often unpredictable. What are the normal sources of leadership of the organization? Do leaders normally come up the ladder in the particular technical field or are they transferred in from other organizations? Are they political figures or technocrats? How important are family, tribal, or interest group links? Development projects often last a minimum of 5 to 10 years, hence, assumptions must be made about the future leadership of the organization, and these assumptions should be based on a review of the past and an estimate of the future.

2. Structure

a. What is the legal basis for the organization? Is it reasonably permanent? Does it have legal authority to carry out the activities contemplated in the proposed project? Does the legal base cover the selection of leaders from within the organization? If so, what does it provide? As innovations are implied in most projects, can these be accommodated within the present legal structure?

b. What is the pattern of internal organization? Are there significant weaknesses in divisions essential to the project? If decentralized operations will be needed are they likely to work? Will project implementation involve roles for several organizations? If so, do all of them have minimal administrative capacity? How will they work together? How will their efforts be coordinated?

c, In viewing the structure of organizations, it is of course necessary to look at the informal as well as the formal structure. What is the pattern of behavior within the organization on such matters as coordination, appointments, transfer, or removal of personnel, allocation of resources, communication between separate units? How strong are the patterns and traditions? Are they in a state of flux, or do they constitute a rigid pattern of behavior?

3. Role and Commitment

What is the current role of the organization, its primary purpose, as viewed within the organization and by others? Are the activities proposed in the development project compatible with this role, or will this be a wholly new activity? Are the project activities endorsed as relevant and important by personnel in higher and lower levels within the organization? Is it particularly important that the activities contemplated in the development project be known and endorsed by more than the top leadership? What are the incentives? In what way does pursuing the project activity

result in benefits to the personnel in the organization? Will the personnel have expanded responsibilities and staffs, increased promotional opportunities, increased travel allowance, etc.? Incentives are as critical to administrative behavior as to economic behavior and need to be so recognized.

4. Resources

What resources does the organization have--both human and material? From what sources? Do these provide an adequate base upon which to build project activities? Has the organization been supported through provision of adequate resources in the past or has it been understaffed and underfinanced? Will the project resource inputs reinforce and complement the organization's regular flow of resources? If field activities are contemplated, what is the situation on travel allowances, vehicles, etc.? Do the projected activities require a major expansion of resources for the organization? If so, is such an assumption reasonable after assistance is terminated? Is the salary structure sufficient to attract competent personnel, or does the organization suffer from high turnover and transfer out to other organizations? What is the source of recruitment for new personnel? Does the organization have the salary status or other inducements to obtain necessary qualified personnel?

5. Outside Administrative Environment

In addition to the above, it is important to assess the public environment in which the organization is operating. Is the organization generally looked upon as one of the more competent and dynamic institutions carrying out a function which is regarded by the political and bureaucratic leadership as important? In other words, does the organization have a high degree or relevance on the current and projected political scene?

6. Grass Roots Managerial Considerations

How will managerial/administrative arrangements help to improve the capacity of the people to share the benefits of development? What will be the role of local organizations and management (formal, nonformal, traditional, modern)? Can the activities become self-sustaining in the local environment? Is there provision for the development of managerial/administrative skills among local people? Is there an institutional and talent base on which to build such skills?

D. Analytic Talent Needed

The analyses outlined above can best be provided by a person or persons who are not professionally involved in the project, but have a thorough knowledge of the administrative culture and the political forces within the recipient country. To be worthwhile they must be objective and frank and this will require sensitivity and diplomacy of a high order. Their purpose is to identify the strengths and weaknesses of particular organizations in relation to activities contemplated in a development

project; to allow the recipient country(ies) and AID to identify the most appropriate organizations; and to build in assistance or other elements which will strengthen the probability of success, or abandon the project if the risks are too high. In order to be fully useful the analyses should be completed prior to and be the basis of selection of implementing institutions.

E. Project Design and Evaluation

Present AID requirements for design and evaluation can be fully successful only if they are jointly used by recipient country and AID personnel. Consideration should therefore be given to identifying host country personnel at the post-DAP or PID stage who will have a leading role in project development and/or implementation and exposing them to AID seminars in project design and evaluation. Where appropriate, such personnel should be encouraged and supported in participating in the training courses conducted in Washington. Where the number of personnel is significant (15 or more) special training programs may be arranged in the field. This initiative should be taken as early as possible and would most appropriately take place after DAP sector assessments and prior to submission or project identification documents.

APPENDIX L

LOCAL PARTICIPATION

A survey of more than 80 projects for small farm development in rural areas of Africa and Latin America found that the following factors contributed to increasing local participation: 1) geographical boundaries of the projects were well-defined and the client population easily identifiable; 2) project staff held a series of meetings with local leaders and farmers, delegating to them participation in or control over decisions concerning project design; 3) farmers were involved jointly with project staff in testing technological packages and organizational arrangements to be used in the project; 4) participants in subprojects were generally homogeneous in terms of social group and economic class; 5) the project staff developed an effective communication process with and among local participants; 6) organizational arrangements were created to give farmers a voice in decisions concerning project management; 7) high priority was placed on technical training of participants and many were used as paraprofessionals to teach others technical skills; 8) involvement was related initially to single purpose activities, such as credit provision or crop promotion, and later broadened; 9) systems of accountability were established to permit changes in leadership among local participants and to ensure that services were provided efficiently; and 10) opportunities were offered initially for local organizations to participate in income-generating activities.

In brief, experience with rural development indicates that success depends on good organization, the clear assignment of responsibility to an executing agency staffed with well-trained manpower, sufficient resources to coordinate and integrate technical and administrative inputs in the project area, effective procedures for programming, monitoring and control, and with procedures for involving local people in project planning and implementation. But since projects are, by their very nature, temporary and narrowly focused activities, they both depend on and should contribute to the organizational infrastructure and administrative capability of the public and private sectors in the areas in which they operate.

Source: Development Alternatives, Inc., Strategies for Small Farmer Development: An Empirical Study of Rural Development Projects, vol. I (Washington, D.C., 1975) pp. 95-96. Quoted in Dennis Rondinelli and Kenneth Ruddle, Urban Functions in Rural Development;An Analysis of Integrated Spatial Development Policy (Washington, D.C.: USAID, 1976) pp. 135-136.

APPENDIX M

USAID HANDBOOK

SOCIAL SOUNDNESS ANALYSIS

The Social Soundness Analysis has three distinct but related aspects: (1) the compatability of the project with the sociocultural environment in which it is to be introduced (its sociocultural-feasibility); (2) the likelihood that the new practices or institutions introduced among the initial project target population will be diffused among other groups (i.e., the spread effect); and (3) the social impact or distribution of benefits and burdens among different groups, both within the initial project population and beyond.

A central substantive concept of AID policy is the need to assure the wide and significant participation of the poor in the development process. In this sense, "participation" means not only sharing the economic benefits and contribution of resources but also involvement in the processes of problem identification and solution, subproject selection and design, implementation and evaluation. The participation approach to development demands that AID project designers and implementors have a much deeper understanding of the sociocultural setting of projects than has been required in the past.

The analyses and factors listed on the following pages are not intended to be of equal weight and significance. For some projects all factors will be important; for other projects some factors will have higher significance than others. For example, it is believed that motivation is a key factor which will be crucial to any projects. Some other factors may be equally important or may fade in significance if motivation is extremely high. The point is that there will be an interplay between social factors and the project design. These factors are not meant as hoops through which the project must jump; rather they are seen as real features of the terrain on which the project is proposed to operate. Just as a road's design must be suited to the physical terrain so must many projects be adjusted to the particular social terrain--some features of which will present major design questions while other features may not affect the project or, indeed, may be counted upon to significantly boost the probability of project success.

A. Sociocultural Feasibility

Assessment of sociocultural feasibility requires first that values, beliefs, social structure, and organization be taken into account.

The best method for determining the feasibility of project objectives is to know the existing social landscape. There is, for instance, a growing body of literature about the small farmer. He is depicted as an industrious person who, with the proper incentives and inputs, will respond immediately. But many nations where subsistence agriculture is strong and traditional social relationships stronger, are not readily going to turn into collections of individualized model small farmers.

Second, is the necessary contextualism of development measures. A successful introduction or innovation should call for the least amount of social disruption consistent with the attainment of developmental objectives. How does a new crop relate to the existing agricultural economy? How likely is it, given the investment costs, that most poor farmers could grow it? Would it be better to improve existing methods of production in the small farmer and subsistence sector? Ghandi's famous use of the spinning wheel in his promotion of Indian economic self-reliance is an example of brilliant contextualism. Part of the context of the project will be the social structure involved; i.e., the groups and power relationships with which the project must cope. At issue will be: can the existing social structure be used, perhaps with some changes, to expedite the desired developmental change or is an alternative structure necessary.

Third, it is important for project papers to demonstrate that things assumed to be a benefit by the donor are similarly perceived by the recipient. An important principle to be established in finding out what is a benefit is the importance of working from the subjective image that people have of their own circumstances to the devising of measurements that can be agreed upon by donor and recipient for dealing with these problems. What is the meaning of unemployment? What is human distress?

Finally, any understanding of the impact of an innovation upon a culture should involve an understanding of the cultural baggage or demands carried by the innovation, i.e., what demands will the project make on people to take on the characteristics of the donor's society?

Who Lives Where?

A certain amount of basic data against which to assess both socio-cultural feasibility and the likelihood of the desired spread effects of a project must first be acquired. A first step should be a mapping of the area to be affected by projects or programs in such a way that population density and location, ethnic or significant tribal affiliations, language, religious and political orientation, are all depicted in relation to prevailing patterns of economic activity. This would involve overlay mapping the predominant mode of production in terms of the implied sets of social relations. For example, in agricultural projects; is agricultural production carried on by family units, wider based kin groups, or individuals? What is the predominant mode of ownership in each locality: is it a system which vests ownership in individuals or groups?

Groups in local areas should only be identified if they appear to be distinctive, e.g., religious groups, diametrically opposed political parties or tribal groups, different ethnic groups; groups, who for some self-held reasons, act on the basis of a perception of their difference from other groups.

How Are They Organized?

Development projects can entail creation of their own organizational structures using scarce local resources and imported technical and managerial inputs which would be difficult for any country to replicate on a large scale. It may be best to start with an organizational unit that is already locally familiar. In many countries legal recognition of traditional tribes or lineages as corporate groups would enable these entities to trade, hold property, sue and be sued. Modernization efforts which replace the lineage or tribe may entail creation of several unfamiliar and different cooperatives, organizational forms such as individual land tenure, registrations and business law. Replacing the traditional form of organization may thus require new sets of legislation and new sets of Government workers. Use of the traditional organization could maximize existing knowledge, patterns of leadership and entrepreneurial skill. The level of organization specialization in development organizations should be determined by the present social and economic organization of potential project participators and not the degree of specialization thought necessary for the most efficient dispatch of Government business. This said, the case for sticking with existing organizational forms is not clear-cut. To a considerable degree the organizational context of the project can influence its result; use of closely held, traditional power centers to administer a project can assure its failure. New organizational forms can be difficult to start and expensive, but they can create a climate of change necessary for development as well as bring about better use and distribution of project resources.

In sum, no prejudgment is made on whether existing or new organizational units should administer the project. But the importance of this question is considerable as it will entail who gains and who may lose from the project. These considerations will help answer the following questions from a social perspective: What is the basic organizational structure through which the innovation should be channeled? Should a new organization be created or will existing local Government or village organization be sufficient? Note: whichever choice is made will affect power relationships since resources and responsibilities are involved. Will the organizational structure chosen be likely to enhance the likelihood of a positive spread effect?

Allocation of Time

It is unwise to assume that people will respond to economic incentives which to external donors or indigenous officials seem adequate. Lack of response to such incentives should not be viewed as irrational behavior but as reflecting the weight of concerns and priorities other than profit maximization, such as avoidance of risk, strength of nonmaterial values, fear of retaliation, threat to status and/or security, or preference for leisure. For example, if 70% of workers' time is spent on subsistence agriculture necessary for the maintenance of family life and 30% of cash crop production, a labor intensive scheme that would seek to double

monetary incomes may well run into difficulties. It is really vital to assess the amount of discretionary time available to potential project participants. It is also necessary to know the existing allocation of time for males and females, including seasonal variations.

Motivation

What would be the motivation for participation in development activities of the type covered by a project? This involves placing oneself in the position of significant groups, adopting their point of view, and trying to work out the likely reaction. Is the need for the project actually perceived and accepted by potential participators? Often the rationale for a project is really only understandable in the light of information possessed by top management in Governments and development agencies and not shared with prospective participators. In other cases the rationale may be understood by prospective participators but not accepted by them because, rightly or wrongly, they do not perceive it to be in their interest.

A definite motivation must be assigned to each significant group that is expected to participate; it should be the actual motivation of that group and not what someone imagined would be the motivation if he or she were a member of that group. For example, in one group motivation may be a desire for increased power and prestige; another group may desire to follow the example of opinion leaders; another group may desire financial reward; another group may be moved by patriotism because of a key role the project may play in the nation's economy; a desire for their children to have better opportunities, for increased leisure time, for increased efficiency, or even competitiveness may be important.

It must not be assumed that all motivations are conducive to development as we perceive it. If it is found, for example, that a certain population wants a project because it will enable the male farmers to retire their female charges into virtual isolation, a very fundamental question about the project will have been surfaced. Motivation, then, is two-fold: What incentive or perception is needed to interest a given population in a project and what will be the population's disposition of the probable gains from the project?

Minimum Participator Profiles

It should be possible to construct a profile of the potential participator. This profile must specify the minimum requirements, i.e., level of education, resources, skills, attitudes, etc., which would make individual participation possible as well as the maximum attribute possession which might tend to discourage participation on the part of various individuals. A minimum participator profile will emphasize who could reasonably be expected to participate. Mobility and motivational data will give numbers and locations. Where, at minimum, is the project or program to affect? What is the basis for this estimate? How, at minimum, are participators expected to adopt new patterns of behavior implied by adoption of innovation? What is the minimum, in terms of extension contact, media contact,

or contact with opinion leaders, necessary to secure lasting benefits from the program? What is the longest period of time envisaged for the adoption of innovation?

Matching Participators and Projects

When data on the nature and location of groups and the participators profiles are compared, it should be possible to identify and locate those who probably will participate. This would mean that against the background of proposals one could roughly estimate where the potential participators were located and how many could reasonably be expected to become involved. These potentials could be quantitatively mapped out on charts. The charts would reflect where and with what kinds of groups a particular type of project could actually be executed and where it should be executed to achieve maximum effect.

Who will not participate directly in the project? How will successful execution of this project benefit these people? What groups will be adversely affected, receive indirect benefits (which they may not be aware of) or be totally unaffected? What are the number and characteristics of such groups? Where are they located? There should be some plausible linkage, some definitely discernable relationship, between the circumstances of those who are small in number and who will be assisted by the project and those who are many and who are ultimately expected to become beneficiaries.

Obstacles

Armed with data on the location and number of potential participators as well as an assessment of what would have to happen if this potential is to be realized, the next step would be to identify social, political, or religious obstacles to project implementation. These obstacles, if overcome, should result in self-generation of project or program effects to encompass a predefined target area.

Those groups which stand to lose or gain nothing as a result of satisfactory project implementation should be identified. Any change in patterns of resource allocation, deferred consumption, or elimination of inefficient or wasteful practices will worsen the position of some groups. For example, cooperatives may be opposed by private businessmen; birth control measures may be opposed by religious groups or doctors; mechanization may be opposed by unions; ethnic groups may oppose aid to other groups; creation of government monopolies may be resisted by private interest; private consumer groups may oppose paying for services which stem from attempts to improve institutional performance.

Communications Strategies

How to communicate with potential project participants in the project and spread areas is a priority problem which is often complicated by the cultural distance between change agents and prospective participants, especially when the latter are rural, poor, uneducated, and/or belong to

different ethnic, linguistic, or religious groups. Successful communication requires devising a communications strategy, identification of points of origin for communications and points of destination, the process of communication covering who does what, and the content, nature, and frequency of the communication. The extent to which modification and improvement of existing materials is required can be determined. News media links, radio, papers, personal contacts, etc., may have to be instituted to avoid bottlenecks. Decisions should be taken on the timing and frequency of messages, the need to have feedback so that necessary improvements can be made, and the best type of media for particular situations.

What to communicate in order to encourage participation is the next problem. Emphasis should be on the advantages to prospective participants, notably increased incomes and/or improved well-being. Few development programs or projects explain the economic and social logic behind development measures to potential participants. But it is, or should be, true that achievement of a significant change will enable creation of a better environment. These kinds of national or regional goals can be made meaningful through communications strategies at the local level.

B. Spread Effects: The Diffusion of Innovation

Since there are not enough resources to mount enough projects to ensure that every poor person or family can become a direct recipient of project aid the achievement of spread beyond the initial project target population is a crucial issue in the design and appraisal of projects. Ideas and assumptions about how to produce project spread effects are still at the theoretical stage. It is, however, generally recognized that ability to achieve significant spread effects will be a critical factor in determining the developmental impact of projects which aim to help the poor. The impact of many projects has been on the relatively well off and the outcome of projects in which the very poor are the target population is hard to predict. Desire or capacity to participate in development projects if often low among the very poor and it seems reasonable to suppose that as the target group for projects shifts more to the poor, the achievement of spread effects is likely to become even more difficult.

Project designs have often not dealt adequately with the achievement of spread effects. As a result, years after the completion of the project, the level of performance is far higher in the original project area than in the areas that were supposed to be encompassed by spread effects. For example, attempts to improve institutional performance have often been successful but only for the institution directly affected by the project. There should be a statement relating project target figures to existing levels of income and productivity, both in the project and potential spread areas.

Resources are now concentrated in a project area in order to reach the critical level thought necessary for development. But the potential

spread area where development is to take place, and where spread must take place if the project is to justify itself at higher purpose or goal levels of analysis does not directly receive project inputs. Spread effects can provide a linkage between the conception of a project and the conception of a sectoral goal. Planners should try to know how many projects must be located in what areas, among what kinds of people, with what probable outcome, in order to give effect to a sectoral or regional plan. Each project proposal should have an explicit treatment of project spread plans.

The achievement of spread effects is a genuine inter-sectoral and inter-disciplinary problem. Achievement of spread effects must rely heavily on economic insights but also requires a geographical dimension because of the need to consider climate, environment, demography, and relationships involving space and location; it requires a sociological dimension because of the need to assess values and beliefs in relation to behavior; it requires a psychological dimension because of the need to assess motivation and to devise and construct a communications strategy; and it needs an ideological dimension because the issue of who gets what and why is a political and cultural matter.

The concern here is with socio-cultural rather than technical constraints on the spread of a technical or institutional innovation beyond the initial project population. It thus involves applying many of the considerations discussed above in connection with the feasibility of the project in its initial setting to the broader population to which spread is intended. These considerations include the social characteristics of the population, how they are organized, how they allocate their time and can be expected to respond to incentives, their motivations, minimum participator profiles, obstacles which can be anticipated, and communications strategies. The following paragraphs deal with some special considerations which, while relevant for the initial project population, are especially significant for achievement of spread effects.

Leadership/Authority

In each area to which spread is intended it should be possible to ascertain who are the most respected leaders. It should be emphasized that often support from such figures far outweighs the best efforts of good extension workers. Special attempts should be made to ensure the support of such people. Such individuals may well perform in their communities the same role that extension personnel perform in the area of immediate project impact and on that basis it may be reasonable for the government to recognize the quasi-official nature of their work by giving them such reasonable assistance as they may request. It is necessary, however, to ascertain the interests of such individual groups and be confident that they are not in conflict with desired social aims.

It is important to delineate the characteristics and functions of leadership in the various groups. For example, where individual choice is not heavily circumscribed by social obligations or institutional regulations, it will be useful to know who the opinion leaders are and where they are

located. This includes understanding how leaders exercise authority. The support of such people may ultimately be vital to the success of policies aimed at securing the adoption of a technical or institutional innovation. These leaders may not by themselves be involved in project type activities; instead, they may be political or religious leaders, high officials, or even the most senior citizens. The issue that has to be resolved is who are the leaders--both modern and traditional--whose support or cooperation or lack of opposition will be essential to the success of particular projects and programs? (The answer to this may be that alternative organizational structure/leadership may need to be a necessary part of the project.)

Patterns of Mobility

Where do people migrate to seasonally or permanently? Where do they go to work, to market, to shop, to look at demonstration farms, or for leisure? Each group of people will have a radius of mobility, or outer limit beyond which there will be a few personal contacts. Establishment of this locus and radius of mobility would be of great importance in decisions to locate projects and/or in the decisions about extension work or improvement of institutional performance.

With the mobility radii for various groups in a country, patterns of movement might be broken down for significant activities, e.g., agricultural, trading, religious, so that estimates of the most frequented places of personal contact could be identified. Where seasonal activities and inactivities are involved, the time of the year and the length of time involved, might be of utility.

At the same time, also, the typical mobility patterns for officials could be noted on the same basis, that is to say maximum distance traveled from home stations and locations of home stations and areas visited, activities, duration of contacts with clients, and frequencies of such contacts.

It may be helpful to plot movements within the radii of mobility insofar as contact with opinion leaders is concerned. Then, with data on the nature and location of media, it would be possible to obtain a good idea of how the average person receives information. Information mobility should be assessed. The information inputs into a community can be charted out to attach weighting in terms of effectiveness and cost. Particularly in education projects the question of vertical mobility becomes crucial as the success of such projects depends upon whether vertical mobility is possible.

In effect, the attempt should be to try to establish the process for learning and the adoption of innovation.

Previous Project Design and Execution

Very few projects are actually new in conception or design; they may be smaller or larger, they may be in new areas or have some new dimen-

sion, but there is usually a discernible relationship with the past. Cause and effect are difficult to determine. Frequently, increases in productivity may occur due to causes that have nothing to do with a project (such as the construction of a road into the project area) though often it is claimed that they have occurred because of a project. Is there any evidence to show that spread effects occurred as a result of successful execution of previous projects?

It has also been found that often a "new" project has a history of trial and failure under earlier governments, including the colonial administration. This history may tell a great deal which can help the analysis of the "new" project.

Maximum Information and Resource Distances

What has to spread? Does spread involve knowledge, techniques and methods, plant and genetic material, livestock, etc.? There are obvious constraints on the distribution of physical resources such as plants and livestock and the limitations of other forms of spread can be assessed by examining communications data as well as the data on mobility.

Most projects adopt a short time horizon. Often, development needs to be conceptualized over a fifteen or twenty year period. The timing of most projects is predicated by the implicit model of inputs and outputs. It will take so long to obtain seed and fertilizer, so long to achieve a herd size of some figure or other; it is very seldom the case that project time horizons takes into account how long it takes to learn or acquire the new methods and techniques that are required for social change. How long should be allowed to assure that desired spread effects are under way with reasonable prospects of continuing?

Spread effects must be planned and worked for rather than assumed to occur naturally. Traditional project planning has emphasized the vertical relationships of a personal nature between officialdom and participators. But spread may often involve horizontal relationships between communities, farmers or media inputs. Spread effects can be understood more adequately when more comprehensive social data is collected. If reliable data has been obtained it should then be possible to estimate more accurately than at present the actual numbers of potential participators and resources required to achieve change.

C. Social Consequences and Benefit Incidence

Both the project itself and its spread to a wider population will affect different groups in different ways. Some groups will be better off and some worse off. The increasing concern with reaching the poor and those groups hitherto largely by-passed in the development process--such as women--creates a special need to identify the differential social impact of a project and particularly how it will affect the poorer groups. The most effective opportunity to consider benefit incidence is at the initial stage of project conception and formulation. At this stage it is still

possible to reject a project if its social impact is regressive, to modify it to make it more compatible with equity objectives, or to consider appropriate compensatory measures to rectify the damage or losses to those who are likely to be adversely affected. At this early stage, it is important, therefore, to identify, as explicitly as possible, (a) the group(s) whom the project is intended to help, (b) those who are likely to be adversely affected, and (c) those who may be indirectly affected (either positively or negatively) such as ultimate consumers of a basic product, the price of which is reduced or increased. In other words, how are the benefits and burdens of the project distributed among different geographical, functional (e.g., farmers, herdsmen, farm laborers, construction workers), or communal groups and what is the socioeconomic standing of these groups relative to the national or regional level of income and well-being?

In assessing benefit incidence it is necessary to bear in mind that the recipient of the goods and/or services provided under a project is not necessarily the person to whom the major benefits of the project accrue. A tenant farm family, for instance, may receive new seeds, fertilizer, and credit to pay for them and their yield may rise. But the landlord may raise the rent and appropriate the lion's share of the incremental income flow. In order to continue to rent the land at the new (higher) rent the tenant farmer must continue the new practices; but this will involve bigger inputs of labor on the family's part and perhaps greater risk. How much benefit accrues to the farm family? Or a farmer may adopt new practices and his yield may double, but the price of his crop drops so much as a result of other farmers doing the same that his income rises very little (and he and/or his wife also may be working harder and assuming greater risks). The beneficiaries are those who pay lower prices for the food they consume, such as landless laborers and employees who get new jobs in factories, public works, etc. made possible by the drop in the price of wage goods.

Identifying the incidence of benefits is somewhat like identifying who bears the burden of indirect taxes; both involve how much of the benefit (or burden) is passed on.

As noted above the adverse effects of projects and the groups affected should be identified as clearly as possible with a view to modifying the project or compensating those adversely affected, especially if they are members of the poorer or underpriviledged social strata. For instance, agricultural projects which make access to productive resources more unequal, promote the concentration of land in the hands of a few farmers, and encourage labor replacing mechanization tend to aggravate discrepancies in levels of living, reduce employment opportunities, and accelerate migration to the cities. All of these probable results involve social and often economic costs which need to be taken into consideration.

Assessment of the distribution of the benefits and burdens can make use of the data and insights obtained about the project population discussed above in connection with sociocultural feasibility.

In dealing with equity and benefit incidence a limited number of criteria seem especially important for assessing the social costs and benefits of projects. These criteria are as follows:

A. Access to resources and opportunities (e.g., land, capital credit, education, markets) and in what ways and to what extent such access is broadened (or narrowed). The questions to be identified and analyzed under this heading would include, in the case of an agricultural loan, trends in land tenure arrangements and how they would be affected; the availability to target farmers of improved inputs (seeds, fertilizers), implements and the credit with which to finance them; access to technical information and to markets, including the existence and extent of farm-to-market roads; and how price policy, including taxes and subsidies, affect the target group. This criterion measures the potential effect of the project on the distribution of wealth and income.

B. Employment. In a sense this is a special case of access to resources and opportunities (i.e., productive work) but because of its special importance it deserves to be treated separately. Among the issues to be covered here are factor intensity and the related question of the amount and type of employment to be generated or eliminated as a result of the project, as for instance by the introduction of labor-absorbing or labor-replacing practices and equipment. It is especially important to consider and predict the implications for target groups which are already characterized by serious unemployment/underemployment, such as both urban and rural unskilled workers, the educated unemployed, and women.

C. Rural displacement, migration, and urbanization. This criterion is concerned with what groups might be pushed off the land or in other ways uprooted as a result of the project, where they would be likely to move to, and how they would be reabsorbed into the economic and social life of the country.

D. Changes in power and participation as between the target group and different socio-economic, regional, ethnic, and other groupings and the implications thereof for public policy. Each of the three preceding criteria is related to the redistribution of power and of opportunities for participation, but it is also necessary to recognize how much shifts affect the capacity of different groups to influence public policy.

In analyzing the social implication of a project proposal under each of these four criteria, precision should be stressed and quantitative data should be developed wherever possible. Quantification clearly is easier for some criteria, such as the employment effect and the access to resources of target groups, than for say, the effect on the distribution of power and influence. Despite the difficulties of measurement, quantification, even if only in orders of magnitude, remains important to support the qualitative analysis. Where quantification is not possible, specificity should still be stressed as much as possible.

- - - - - - - - - - - - - - - - - - -

When should information discussed in this appendix be produced, when should its collection be undertaken? What resources will be required to

carry out this kind of work in the initial stages of data collections? In the case of a region or project area, with the use of professional expertise the data should be possible to obtain in two to three weeks; in the case of a national collection it would probably be advisable to obtain the help of some appropriate local institution or university contract, and again this should entail an exercise of not more than a few months. Social information should not, of course, stand out as being different or special but should be collected in phase with, and integrated with, other stages of project documentation.

APPENDIX N

DAC
GUIDELINES FOR IMPROVING AID IMPLEMENTATION[1]

INTRODUCTION

Prompt and effective use of aid allocations as a contribution to sound economic and social development is a common objective of aid donors and recipients. The DAC has devoted considerable attention to this problem, prompted by acute disbursement difficulties faced by some aid agencies during 1976/1977. Although these acute difficulties have now been largely overcome, there remains a permanent interest in promoting effective improvements in aid implementation.

An essential conclusion of the DAC's work is that recent disbursement difficulties are not basically due to longer-term absorptive capacity constraints in developing countries. Although there are limiting factors to rapid resource absorption in developing countries (e.g., administrative capacity, technical and managerial skills), especially in the least-developed among them, donors can contribute to the removal of short- and medium-term constraints.

The results of the DAC's work are set out in this report in the form of guidelines for improving aid implementation which DAC Members agree to take into account and work towards in the future evolution of their aid procedures and practices. These guidelines constitute to some extent a list of "best practices". It is realised that there are considerable differences in administrative practices and legal and constitutional requirements between DAC Members and that some donors will be able to move further than others in the short term in adapting their policies and procedures to reflect this consensus. Experience shows that a great deal can be accomplished within the framework of existing legislation if it is applied flexibly and with full consideration for the very different circumstances and needs of developing countries. Where certain legislative and regulatory constraints become apparent DAC Members are prepared to consider changes that would contribute to more effective aid implementation and disbursement. The means by which donors apply the guidelines may differ from one country to another. Results may be obtained through individual donor initiatives, through collective efforts involving both donors and recipients or through bilateral donor-recipient endeavour.

As partners in the development co-operation effort donors and recipients can only achieve improvement as a result of joint endeavour. In this spirit it is evident that developing countries as well as donors have a responsibility to strengthen their capacity to use aid effectively. The recommendations which follow concentrate on opportunities for donor action.

---

1. The Guidelines for Improving Aid Implementation were adopted by the DAC High Level Meeting held on 19 and 20 November 1979.

Aid agencies and recipients are already engaged in a dialogue on the appropriate means of achieving common goals in the course of their day-to-day contacts. The DAC itself has benefited in its work from informal consultations with developing countries. Substantial agreement has emerged between senior officials of donor and recipient governments about areas of desirable improvement in aid implementation. There is also broad agreement on the range of measures which could be introduced to effect improvement. It is hoped that these guidelines will be useful for further dialogue between developing and developed countries in competent international fora concerned with aid implementation.

In proposing these guidelines for improved aid management DAC Members hope to meet the three following objectives:

- to contribute to the economic and social development of developing countries while making the best use of available human and material resources;
- to facilitate greater participation by developing countries in project planning, preparation and implementation;
- to combine speed of implementation with effective use of resources for development.

A. ASSISTANCE TO STRENGTHEN RECIPIENTS' ADMINISTRATIVE CAPACITY

Action to strengthen recipients' administrative capacity must be compatible with the principle of respect for the sovereignty of the recipient country. Donors may offer advice or point to specific constraints on the recipient side where they feel external assistance may be of use; nevertheless, the decision to request external assistance to strengthen its own administrative capacity lies ultimately with the recipient.

DAC Members reiterate their willingness to respond to requests for assistance in improving administrative capacity in developing countries through action in such areas as providing advice and training (including third-country training) in development planning, project preparation, general management, budgeting, procurement and accounting. In this connection DAC Members are aware of the need to improve, as appropriate, their own training facilities and planning for future manpower requirements, for both their own and recipient country personnel.

DAC Members are prepared to examine carefully with recipients the administrative needs associated with aid-financed activities, recognising that the administrative and other resources available to the recipient are limited, and to offer to help recipients expand them.

At the same time, DAC Members are ready to examine more closely with recipients the administrative implications of development programmes in general and resulting needs for external technical assistance. They recognise the importance of considering the overall administrative capacity of developing countries and not limiting their concern to the

administrative requirements of individual aid activities. In this connection, donors will also consider the scope for strengthening the administrative capacity of developing countries for identifying and preparing projects and programmes.

DAC Members recognise the desirability of channelling aid to the greatest extent possible through the administrative and institutional frameworks already existing in developing countries and of helping recipients to improve these, where necessary, rather than setting up donor-oriented administrative enclaves inadequately linked to developing country institutions.

B. IMPROVED AID PROCEDURES

The procedures used by both donors and recipients are important factors in effective and speedy project/programme implementation. Information and reporting requirements in programme/project selection, implementation, accounting and evaluation should be related as closely as possible to recipients' own administrative practices and requirements. When recipient systems are considered to require strengthening to ensure effective project preparation and implementation, joint efforts should be made (perhaps in multilateral action) to improve standards and capacity for information-gathering in developing countries. Donors should be aware of the burden which requirements for special information place on recipients and should attempt to meet their own particular needs through their own administrative facilities.

While there are limits on the introduction of simpler and of more flexible procedures, in view of the complexity of administrative systems and the large sums of public funds involved, flexibility within the limits set by existing procedures can have a positive impact on the efficiency of the project/programme cycle.

One approach to simplification has been the adoption of streamlined procedures or the extension of sector aid and other mechanisms through particular types of projects, especially small and medium-scale projects, can be grouped. Such procedures could be applied, inter alia, to the approval process, the frequency and detail of project reports and the method of procurement.

i) Preparation: identification and appraisal

While thoroughness in project preparation including data collection is generally justified by the subsequent speed and effectiveness of implementation, restraint may need to be exercised in the amount of documentation requested from recipients and in the elaborateness of targets and cost projections, especially in projects of an experimental nature. Donors, aware of the workload their appraisal procedures may impose on recipients, will be prepared to consider offering technical assistance for preparation and data collection, if appropriate. Furthermore, to

reduce duplication of work at the appraisal stage, DAC Members are ready to consider the use of feasibility studies commissioned by other donors.

ii) Implementation: procurement

Delays in implementation at the procurement stage can be attributed to the complexity of certain procurement procedures requested by donors and an overly rigid application of procurement regulations. DAC Members appreciate that a balance must be struck between the objective of designing procedures which enable the most economic use of resources and the need to avoid excessively complicated regulations which overtax recipients' administrative capacity. To this end DAC Members will endeavour: to apply procurement regulations flexibly; to strengthen recipient procurement capabilities, in particular with respect to the international competitive bidding procedure; to promote the use of simpler procedures (e.g., selective international bidding and negotiated or direct procurement) in cases where there are only a limited number of qualified suppliers; to assist recipients who wish to improve their familiarity with potential suppliers of specific kinds of goods and services or who request assistance with the preparation of international invitations to tender; and to keep procurement lists of eligible items as comprehensive as possible.

iii) Financial/Budgetary Procedures

Aid agencies are often required to conform to the budgetary regulations set out for domestic financial administration, whereas more flexible mechanisms may be desirable for responsible aid management. In this spirit DAC Members are prepared to consider the practicability of introducing and extending simplified budgetary/financial regulations. These may include: the ability to shift funds among budgetary items and project components; the use of various techniques of advancing money to recipients for expenditures for aid projects and programmes subject to subsequent verification; programme-wide rather than project-by-project application of percentage ceilings for specific categories of expenditure (e.g., local costs); the adoption of the principle that action initiated on projects before the signature of a formal agreement is eligible for retroactive financing.

iv) Monitoring and Evaluation

Monitoring is clearly important for the early detection of difficulties in project or programme design and implementation and can be combined with a procedure for expeditious approval of project changes. However, DAC Members are prepared to examine their monitoring arrangements with recipients to ensure that the burdens entailed are fully justified. Similar considerations could be applied to the ex post evaluation of aid-financed development activities.

C. MORE EFFECTIVE ADMINISTRATIVE STRUCTURES

i) Delegation of Decision-Making Authority

Centralisation of decision-making authority in aid agencies can be a source of delay in project/programme implementation and of possible errors in programme management, owing to a lack of current knowledge of operating conditions in recipient countries. Greater delegation of responsibilities to competent donor field representation and to recipient authorities is one way of making programme management more responsive to local conditions. The extent to which delegation is cost-effective depends on the size of aid staffs, the nature of a given bilateral aid programme and the administrative capacity of the recipient.

Donors are therefore prepared to examine the opportunities for delegating greater decision-making to field missions and where feasible to the recipient country. Some DAC Members have been able to assign to their own field missions some or all of the following authorities: the approval within specified financial ceilings of new projects or activities, the reallocation of approved programme funds between projects and purposes, the approval of changes in the scope and design of projects within reasonable limits, the advancement or reimburement of monies to recipient authorities for eligible expenditures and the negotiation of agreements.

ii) Re-Assessing the Adequacy of Present Aid Staffing

The staffing of aid agencies is currently governed by restraints on public sector growth in most donor countries. While the principle of avoiding excessive expansion of aid bureaucracies is a sound one, it inevitably implies the shifting of administrative burden to recipients when programmes grow, unless there are off-setting improvements in aid policies and procedures. It is significant that those donors in a position to increase their staffs (notably the World Bank) have done so in order to deal effectively with the rising volume of available resources. Other donors may be able to reorganise or re-deploy existing personnel, with similar results.

D. PROCEDURES FOR PROGRAMME PLANNING

Since the flow of resources to developing countries is a function of prior commitments, there must be sustained progress in project and programme preparation. However, programme planning has become more complex in recent years due to increased competition between donors for promising projects, the changing nature of projects and programmes and the introduction of more refined planning methods.

Some DAC Members have been able to achieve disbursement targets through the use of certain forward planning mechanisms. One of these, useful

in the context of some budgetary systems has been over-programming, which involves identifying and developing more potential projects than available resources appear to warrant. Such a device can be useful in preventing shortfalls in spending which result from unforeseen delays in particular projects. Some countries have also found it useful to develop a "portfolio" of projects available for financing.

Long term arrangements for informing recipients of the probable volume and type of aid resources to be expected over time can make it easier for aid resources to be integrated into the planning and budgetary cycles of developing countries. When a country received aid on a regular basis from a donor, the combined use of country programming and multi-year commitments can be one effective way of providing an element of continuity and predictability in aid flows. DAC Members recognise the value of forward planning of financial levels which can be discussed with recipients, while periodic review and, where necessary, revision of these levels can permit continued flexibility in aid management. Other measures which can be contemplated are the use of firm commitments for a given fiscal year and improved disbursement forecasts worked out with recipients.

E. INCREASED FLEXIBILITY IN AID USES

In order to maximize the effectiveness of aid, the manner in which resources are transferred must be adapted to the evolving circumatances of developing countries. While project aid is likely to remain the preferred form of development co-operation, other types of assistance can be a more direct response to certain recipient requirements. For example, general assistance to specific sectors or activities could allow joint agreement on basic approaches while enabling greater reliance on recipients for the planning and implementation of individual projects. DAC Members are aware of the advantages of a flexible combination of project and non-project assistance and technical co-operation. With this in mind they are prepared to study the scope for additional measures to ensure that aid is provided in appropriate forms.

Recent changes in global economic circumstances have contributed to growing problems in recipients of domestic resource constraints to further external investment. In recognition of these constraints, the DAC adopted Guidelines on Local and Recurrent Cost Financing on 3rd May 1979. The Guidelines called for the relaxation of donor policies in this area and outline the conditions under which local and recurrent cost financing would be most appropriate.

F. POSSIBLE COLLECTIVE ACTION IN CONCERT WITH RECIPIENT COUNTRIES

In addition to measures which aid agencies can take individually or bilaterally with a recipient to improve aid implementation, further

co-operation and co-ordination in concert with recipients and other donors are required. In some cases a certain degree of harmonization on the basis of the simplest procedures possible may be appropriate; however, the ability to deal flexibly with specific aid activities and recipients remains of primary concern. Although harmonization of donor procedures is attractive in principle, it is virtually untried and may present numerous practical problems. Nevertheless it remains important that some harmonization be carried forward with a view to reducing rather than increasing the burden which donor procedures impose on recipients. Aid agencies may be able to reduce differences in their procedures where the diversity and disparities in them impinge heavily on the administrative capacity of recipients. Some examples of possible harmonization could include:

- a common format for basic information required to document requests for external financing possibly including core criteria for appraisal of projects or programmes[2]
- wider use of feasibility studies commissioned by other donors and
- joint appraisal or fact-finding missions.

While indispensable to the mounting of some large-scale investment projects, co-financing can complicate the negotiation and implementation of new development undertakings. The use by each financing partner of its own procedures in the absence of formal co-ordination can be a source of difficulty for aid implementation. Donors will be considering the possibility of resorting more frequently to a "lead agency" with overall management responsibility.

Co-ordinated donor specialisation in certain types of projects or in particular economic sectors has been used by some recipients (e.g., Bangladesh) to ensure the optimum mobilisation of resources, to permit an even spread over sectors, and to prevent excessive donor competition for projects. In addition some aid agencies have found that sector specialisation has led to more informed programme management. Similar results may be achieved by a certain degree of concentration on countries or regions within countries, particularly when the absolute size of a donor's programme is small.

More information sharing may also reduce the number of requests to recipients for supplementary data on projects and programmes. Information sharing can be most effective at the local level but should be formalized only in consultation with recipient authorities. DAC Members are prepared to promote further exchanges of information including, with the consent of the recipient, reports prepared by outside consultants and the results of their own project evaluation.

---

2. The Club du Sahel has under consideration the introduction of a common project request form; as far as technical assistance is concerned, Colombo Plan countries have long employed a common request form.

G. FUTURE WORK

DAC Members are determined to continue work towards improving the effectiveness of aid implementation. A detailed study of several donors' procedures should lead to specific, concrete proposals for action. The DAC will be examining the possibilities for collective donor action listed in Section F. The Committee will also study the utility of evolving guidelines for the use of various forms of non-project assistance.

The dialogue with developing countries concerning the question of aid implementation will be pursued through appropriate channels. DAC Members, in multilateral agencies and in such fora as the consortia and consultative groups, will bear these guidelines in mind in discussions on aid implementation.

Discussion of aid implementation questions in the DAC Aid Reviews will take into account progress with respect to these guidelines.

APPENDIX O

ARE PROJECTS REPLICABLE?

The meeting discussed the replicability of projects with some doubt as to whether the concept could be applied to a project as a whole. It was suggested during the meeting, and accepted by implication, that certain elements of projects might be more replicable than others, and it was also said, as an example, that types of approach used and certain project design methods were replicable. Beyond that, in increasing order of replicability, the following features were mentioned:

(1) the ideology behind the project, which was felt not to be replicable at all;

(2) project objectives which could be to some extent replicable;

(3) methodology which was moderately replicable;

(4) the structural and organizational set-up which also had a fairly good chance of being replicable;

(5) the technology applied was almost totally replicable;

(6) training methods were also considered almost totally replicable.

As to the role of case studies in the consideration of replicability, it was generally agreed that they might be more appropriate for deciding what not to replicate than what to replicate. It was also pointed out that in replication, the human constraint in the form of the project leader might be the key element.

Certain other positive elements for replication were emphasized as well. It was said first of all that there was a fairly large area of unused potential for replication, particularly in the area of low cost rural technology and that one of the key constraints in that area appeared to be the lack of exchange of information. Secondly, it was felt that whether or not a given experience would be replicated might depend critically on the involvement of governmental decision-makers in the project life from the very beginning.

Two dangers of replication were also specifically pointed out. One concerned the fact that it was dangerous to take short cuts in project design and that a general preconception that the project could be replicated might lead to serious errors. Secondly, projects might by their demonstration effects lead to spontaneous replication outside the project area which, however, may only be partial in that the spontaneous replication might focus on certain of the most profitable elements in the project. Such replication could have perverse effects if measured against the project's own objectives, in particular by benefiting the relatively much richer sections of the community.

Source: OECD Development Centre; Seminar on Development Projects Designed To Reach the Lowest Income Groups (August 1975) pp. 7-8.

BIBLIOGRAPHY

Ahmad, Yusuf J. "Project Identification, Analysis and Preparation in Developing Countries: A Discursive Commentary." Development and Change (July 1975):83-89.

Asian Development Bank. Appropriate Technology and Its Application in the Activities of the ADB. Occasional Paper No. 7. Manila: Asian Development Bank, April 1977.

----------. Loan Administration Manual. Manila: Asian Development Bank, August 1978.

Bacharach, Peter. Evaluating Development Programs: A Synthesis of Recent Experience. Occasional Paper No. 3. Mimeographed. Paris: OECD Development Centre, 1977.

Baum, Warren C. "The Project Cycle." Finance and Development (June 1970):2-13.

Bir-gegard, Lars-Erik. The Project Selection Process in Kenya, Zambia, Tanzania. Stockholm: The Economic Research Institute, Stockholm School of Economics, 1975.

Chadenet, B., and J.A. King. "What is 'A World Bank Project'?" Finance and Development (September 1972):2-12.

Chenery, Hollis. Structural Change and Development Policy. London: Oxford University Press, 1979.

----------. "Comparative Advantage and Development Policy." American Economic Review (March 1961):18-51.

----------, and M. Syrquin. Patterns of Development 1950-70. London: Oxford University Press, 1975.

----------, et. al. Redestribution with Growth. London: Oxford University Press, 1974.

Cochrane, Glynn. The Cultural Appraisal of Development Projects. New York: Praeger Publishers, 1979.

Development Alternatives, Inc. Strategies for Small Farmer Development: An Empirical Study of Rural Development Projects. Vol. 1 Washington, D.C.: Development Alternatives, Inc., 1975.

Development Assistance Committee. The Guidelines for Improving and Implementation. Paris: DAC, November 1979.

Eckaus, Richard S., ed. Appropriate Technologies for Developing Countries. Washington, D.C.: National Academy of Sciences, 1977.

Freeman, Howard E., Peter H. Rossi, and Sonia R. Wright. Evaluating Social Projects in Developing Countries. Paris: OECD Development Center, 1979.

Gant, George F. Development Administration: Concepts, Goals, Methods. Madison, Wisconsin: University of Wisconsin Press, 1979.

Heaphy, James G., ed. Spatial Dimensions of Development Administration. Durham, N.C.: Duke University Press, 1971.

Heller, Peter. "The Underfinancing of Recurrent Development Costs." Finance and Development (March 1979):38-41.

Hirschmann, Albert O. "Project Design, Trait-Taking and Trait-Making." Development Projects Observed. Washington, D.C.: The Brookings Institution, 1967.

Imboden, N. A Management Approach to Project Appraisal and Evaluation. Paris: OECD Development Centre, 1978.

Independent Commission on International Development Issues. North-South--A Program for Survival: Report of the Independent Commission on International Development Issues (Brandt Commission Report). Boston: Massachusetts Institute of Technology Press, 1980.

Jakobson, Leo. "Conceptual Dilemmas: Overcoming the Anti-Urban Tradition." Madison, Wisconsin: University of Wisconsin, 1979.

----------. "The Sketch Plan Concept: A Method for Programming Action." Madison, Wisconsin: Regional Planning and Area Development Project, 1981.

----------, and Ved Prakash. "Urban Planning in the Context of a 'New Urbanization'." In Metropolitan Growth. Leo Jakobson and Ved Prakash, eds. New York: John Wiley and Sons, 1974.

Jequier, Nicholas, ed. Appropriate Technology: Problems and Promises. Paris: OECD, 1976.

Lal, Deepak. Methods of Project Analysis: A Review. Baltimore: Johns Hopkins University Press, 1974.

Lele, Uma. The Design of Rural Development: Lessons From Africa. Baltimore: Johns Hopkins University Press, 1975.

Lipton, Michael. Why Poor People Stay Poor: Urban Bias in World Development. Cambridge, Mass.: Harvard University Press, 1977.

Little, I.M.D., and J.A. Mirrlees. Project Appraisal and Planning for Developing Countries. London: Heinemann Educational Books, 1974.

McColl, G.D., and C.D. Throsby. "Multiple Objective Benefit-Cost Analysis and Regional Development." Economic Record 48 (1972):201-219.

Methodological Guidelines for Social Assessment of Technology. Paris: OECD, 1975.

Organization for Economic Cooperation and Development (OECD). Press Release A(79)21. 3 May 1979.

----------. OECD Development Centre. Seminar on Development Projects Designed to Reach the Lowest Income Groups: Summary and Conclusions. Paris: OECD Development Centre, August 1975.

Overseas Development Administration. A Guide to Project Appraisal in Developing Countries. London: Overseas Development Administration, 1972.

Papandreous, Andreas G., and Uri Zouar. The Impact Approach to Project Selection. Vol. II. New York: Praeger Publishers, 1974.

Ray, Anandarup. "Basic Needs and Distribution Weights in Project Choice." Mimeo. Washington, D.C.: The World Bank, May 1978.

Rondinelli, Dennis. "International Requirements for Project Preparation: Aids or Obstacles to Development Planning?" Journal of the American Institute of Planners 42 (1976):314-325.

----------. "Project Identification in Economic Development." Journal of World Trade Law 10 (1976):215-251.

----------, and Aspry A. Palia. Project Planning and Implementation in Developing Countries. Honolulu: Technology and Development Institute; The East-West Center, 1976.

----------, and Kenneth Ruddle. Urban Functions in Rural Development: An Analysis of Integrated Spatial Development Policy. Washington, D.C.: USAID, 1976.

Santa Cruz, Hernan. "The Three Tiers of 'Basic Needs' for Rural Development." Finance and Development (June 1979):29-31.

Schneider, Hartmut. National Objectives and Project Appraisal in Developing Countries. Paris: OECD, 1975.

Seers, Dudley. "The Meaning of Development." Reprint, New York: The Agricultural Development Council, Inc., 1970.

Selowsky, Marcelo. Balancing Trickle Down and Basic Needs Strategies: Income Distribution Issues in Large Middle-Income Countries with Special Reference to Latin America. World Bank Staff Working Paper No. 335. Washington, D.C.: The World Bank, 1979.

Sen, A.K. Collective Choices and Social Welfare. San Francisco: Holden-Day, 1970.

Sen, Keshav C. "Foreign Exchange Constraints and Import Substitution." Diss. University of Michigan-Ann Arbor 1967.

Sen, Keshav C. "Nation Building and Regional Integration." Madison, Wisconsin: USAID-University of Wisconsin Research Project on Economic Interdependence in Southeast Asia, 1966.

Shah, Ramesh P. "Project Management: Cross Your Bridges Before You Come to Them." Management Review (December 1971):21-27.

Solomon, Morris J. Elements of Project Management. Washington, D.C.: Development Project Management Center, USAID, June 1979.

Squire, Lynn, and H.V. Van der Tak. Economic Analysis of Projects. Baltimore: Johns Hopkins University Press, 1975.

Stewart, F. "Technology and Employment in LDCs." In Employment in Developing Nations. E.O. Edwards, ed. New York: Columbia University Press, 1974.

Streeten, Paul. "From Growth to Basic Needs." Finance and Development (September 1979):28-31.

Teitz, Michael B. Policy Evaluation: The Uncertain Guide. Working Paper No. 298. Mimeographed. Berkeley: University of California Institute of Urban and Regional Development, September 1978.

Thamhain, Hans J., and David L. Wilemon. "Conflict Management in Project Life Cycles." Sloan Management Review 16 (1975):31-50.

United Nations. Administration of Development Programmes and Projects: Some Major Issues. New York: United Nations, 1971.

----------. Administrative Aspects of Planning. New York: United Nations, 1969.

----------. Public Administration in the Second United Nations Development Decade. New York: United Nations, 1971.

United Nations Education, Scientific, and Cultural Organization (UNESCO). Report of a Unified Approach to Development. New York: United Nations, 1974.

United Nations Industrial Development Organization (UNIDO). Guidelines for Project Evaluation. New York: United Nations, 1972.

U.S. Agency for International Development (USAID). Handbook 3 on Project Assistance. Washington, D.C.: USAID, February 1978.

----------. Note submitted to OECD for the DAC Meeting of Experts on Aid Evaluation. Amsterdam, 27-29 June 1973.

Walsh, John E., Jr. Preparing Feasibility Studies in Asia. Tokyo: Asian Productivity Organization, 1971.

The World Bank. Appropriate Technology in World Bank Activities. Mimeographed. Washington, D.C.: The World Bank, July 1976.

----------. Project Supervision Handbook. Washington, D.C.: The World Bank, June 1974.