

# The International Development Institute

---

A REPORT OF AN AD HOC COMMITTEE OF THE  
BOARD ON SCIENCE AND TECHNOLOGY FOR INTERNATIONAL DEVELOPMENT

OFFICE OF THE FOREIGN SECRETARY

NATIONAL ACADEMY OF SCIENCES

Washington, D.C. • July 1971

This report has been prepared by an ad hoc committee of the Board on Science and Technology for International Development, Office of the Foreign Secretary, National Academy of Sciences, for the Bureau of Technical Assistance, Agency for International Development, Washington, D.C., under Contract No. csd-2584.

T H E I N T E R N A T I O N A L  
D E V E L O P M E N T I N S T I T U T E

Report of an Ad Hoc Committee  
of the  
Board on Science and Technology  
for International Development

Office of the Foreign Secretary  
NATIONAL ACADEMY OF SCIENCES

July 1971

# NATIONAL ACADEMY OF SCIENCES

2101 CONSTITUTION AVENUE  
WASHINGTON, D. C. 20418

OFFICE OF THE FOREIGN SECRETARY

July, 1971

Dr. Joel Bernstein, Assistant Administrator  
Technical Assistance Bureau  
United States Agency for International Development  
Department of State  
Washington, D. C. 20418

Dear Dr. Bernstein:

I am pleased to submit the Report of the Committee on the International Development Institute. This Committee was convened at the request of the Agency for International Development in October 1970 by the National Academy of Sciences, as an Ad Hoc Committee of the Board on Science and Technology for International Development in the Office of the Foreign Secretary. It was charged with considering the character, purposes, and functions of the International Development Institute proposed by the President of the United States in his September 15, 1970, message to Congress "... to bring U. S. science and technology to bear on the problems of development," as a key element in a reorganized foreign aid program.

The Report endorses the concept of such an Institute, and expresses the hope that it will be established as a landmark institution through which the people of the United States will be able to cooperate with the peoples of the developing countries in devising solutions to world-wide critical human problems. It envisions, as a primary role of the Institute, extension of the knowledge and competence necessary for solving, in time, some of the most serious of these problems. This task would require an institution with the capacity to mobilize the resources of the United States universities, research institutions, industrial and service organizations, and the nation's managerial and technical skills to work with and help improve the institutions and human resources of developing countries. The Committee believes that what we do not know about development is far greater than what we know, and that, without great increases in knowledge, and in the ability to apply it wisely and effectively, the problems of poverty, illiteracy, disease, malnutrition, and the pressures of rapid population growth may have ever more tragic consequences for most of mankind.

The Report is not intended as a blue print for the Institute, but rather as a set of ideas that may contribute to the conceptual development, planning, and public justification of the proposed new organization. It identifies several of the basic difficulties that must be faced, and suggests possible

July, 1971

solutions, with full recognition, however, that other solutions are possible and may be more feasible or desirable.

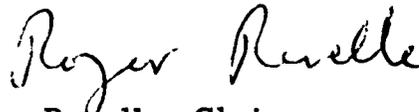
Among these difficulties is that of maintaining a strong link between research and development activities in technical assistance and United States and multilateral organizations for capital assistance. The Committee has suggested that this difficulty could be at least partly overcome by creating a policy research and analysis center within the International Development Institute which would consider both the technical and capital implications of alternative development strategies.

A second difficulty results from the great diversity of developing countries and the fact that many of them have a unique complex of problems that must be attacked in a coordinated manner rather than separately. The report suggests that a much greater share of responsibility for this coordinating function should be passed to the host countries, assisted, where necessary, by a small IDI staff and by the establishment of new joint instrumentalities -- development foundations -- organized cooperatively by special agreements between the United States and a host government.

The most serious difficulty of technical assistance in the past has been the maintenance of long term continuity in programs and funding. Closely linked to this is the provision of career opportunities for highly qualified and strongly motivated development specialists. The problem has been solved on a relatively small scale by some of the large private foundations. But to accomplish the same objective in a federal government organization will require new funding approaches by the Executive and Legislative Branches. The Report suggests some possibilities for these.

In submitting the report we hope that responsible officers of the federal government as well as the public will be stimulated to further thought and to proposals for action on the complex and difficult problems that have been identified and discussed.

Very sincerely yours,



Roger Revelle, Chairman  
Board on Science and Technology  
for International Development

## PREFACE

In this report, prepared by a committee convened by the National Academy of Sciences in October 1970 at the request of the Agency for International Development, we consider the character, purposes, and functions of a United States International Development Institute. Since 1958, committees and boards of the Academy have been working to assist developing nations in their quest for economic and social advancement. The conduct and organization of technical assistance, and especially the place of science and technology therein, have been a continuing concern. Recommendations on this subject were made to the executive branch in a 1967 paper of an ad hoc panel of the Academy's Science Organization Development Board, now the Board on Science and Technology for International Development, as contained in this summary paragraph:

"Establish as an independent agency of the federal government a strong public foundation for technical assistance in science and technology; equip it with a full array of the best operational instruments which have been developed over the years for supporting long-range research and development; free it from the burdens and distractions of meeting large scale capital assistance needs; insulate it from short-term foreign policy dictates and urgencies; and let it fully demonstrate the many ways by which science and technology can contribute to a productive international technical assistance enterprise."

Recommendations to similar effect have been made by several other committees which have examined the question of U.S. technical assistance, including the following published reports:

- A.I.D. and the Universities: Report to the Administrator of the Agency for International Development, by John W. Gardner, April 1964.

- International Development Assistance, statement by the Task Force on International Development Assistance and International Education, National Association of State Universities and Land-Grant Colleges, January 1969.

- A New Conception of U.S. Foreign Aid, a joint statement of the National Planning Association Joint Subcommittee on U.S. Foreign Aid and the NPA Board of Trustees, March 1969.

- U.S. Foreign Assistance in the 1970's: A New Approach, report to the President from the Task Force on International Development, March 1970.

BOARD ON SCIENCE AND TECHNOLOGY FOR INTERNATIONAL DEVELOPMENT

\*\*\*

Ad Hoc Committee on the  
International Development Institute

MEMBERS

Robert A. Charpie, Chairman  
President, Cabot Corporation

Leona Baumgartner  
The Medical Care & Education  
Foundation, Inc.

Ivan L. Bennett  
Director  
New York University Medical Center

Charles S. Dennison  
Vice-President, International  
Minerals and Chemicals Corporation

James P. Grant  
President, Overseas Development  
Council

John D. Montgomery  
Professor of Public Administration  
Harvard University

Waldemar A. Nielsen  
Director, Study of Philanthropy  
Twentieth Century Fund

Eugene B. Skolnikoff  
Chairman, Department of Political  
Science, Massachusetts Institute of  
Technology

D. Woods Thomas  
Associate Dean and Director  
International Programs in Agriculture  
Purdue University

Alvin M. Weinberg  
Director, Oak Ridge National  
Laboratory

Harry E. Wilhelm  
India Representative  
The Ford Foundation

Franklin H. Williams  
President, Phelps-Stokes Fund

Carroll L. Wilson  
Professor, Sloan School of Management  
Massachusetts Institute of Technology

EX OFFICIO MEMBERS

Harrison Brown  
Professor of Science and Government,  
California Institute of Technology;  
Foreign Secretary, NAS

Roger Revelle  
Director, Center for Population Studies  
Harvard University;  
Deputy Foreign Secretary, NAS

STAFF

Julien Engel, Director

Robert W. Brainard

Patricia W. Blair

Linda M. Richardson

OFFICE OF THE FOREIGN SECRETARY

\*\*\*

Board on Science and Technology for  
International Development

MEMBERS

Roger Revelle, Chairman  
Director, Center for Population Studies  
Harvard University

C. Arnold Anderson  
Head  
Comparative Education Center  
University of Chicago

Robert N. Kreidler  
Executive Vice President  
Alfred P. Sloan Foundation

Ivan L. Bennett  
Director  
New York University Medical Center

Roy L. Lovvorn  
Administrator, Cooperative State  
Research Service  
U.S. Department of Agriculture

Nyle C. Brady  
Director of Research and Director  
of Experiment Station  
College of Agriculture  
Cornell University

John J. McKelvey, Jr.  
Associate Director  
Agricultural Sciences  
The Rockefeller Foundation

Carl Djerassi  
Professor  
Department of Chemistry  
Stanford University

Joseph B. Platt  
President, Harvey Mudd College

D. Mark Hegsted  
Professor, Department of Nutrition  
Harvard University School of  
Public Health

H.F. Robinson  
Vice Chancellor  
University System of Georgia

Lady Barbara Ward Jackson  
Albert S. Schweitzer Professor of  
International Economic Development  
Columbia University

Stefan H. Robock  
Professor, Graduate School of Business  
Columbia University

William A.W. Krebs  
Vice President  
Arthur D. Little, Inc.

H. Burr Steinbach  
Director, Marine Biological Laboratory  
Woods Hole Oceanographic Institution

Carroll L. Wilson  
Professor  
Sloan School of Management  
Massachusetts Institute of Technology

MEMBERS EX-OFFICIO

Harrison Brown  
Foreign Secretary  
National Academy of Sciences

Bruce S. Old  
Foreign Secretary  
National Academy of Engineering

Thomas F. Malone  
Deputy Foreign Secretary  
National Academy of Sciences

## CONTENTS

	<u>Page</u>
SUMMARY -- THE OPPORTUNITY . . . . .	1
CHAPTER I	
Requirements for the 1970's . . . . .	9
CHAPTER II	
Priority Problem Areas . . . . .	22
CHAPTER III	
Country-Level Activity . . . . .	31
CHAPTER IV	
Development Research and Analysis . . . . .	41
CHAPTER V	
Development Support Services . . . . .	47
CHAPTER VI	
Institutional Support . . . . .	52
 <u>DIAGRAMS</u>	
IDI Program Elements . . . . .	8
Priority Problem Areas . . . . .	29
Country-Level Activity . . . . .	40
Development Research and Analysis . . . . .	44

## SUMMARY -- THE OPPORTUNITY

In his message to Congress of April 21, 1971, the President proposed creation of a separate International Development Institute\* to "administer a reformed bilateral technical assistance program and . . . to focus U.S. scientific, technological and managerial knowhow on the problems of development." He proposed that the activities of the Institute should include:

Applying U.S. research competence in the sciences to critical problems of development.

Helping to raise the research competence of the lower income countries, in part through assistance in building and strengthening institutions, with special emphasis on agricultural and educational institutions.

Helping to train manpower in the lower income countries.

Helping the lower income countries to finance advisers on development problems.

The National Academy of Sciences has been concerned for many years with the use of science and technology to assist the less developed countries and with means by which U.S. scientists and technologists could contribute more effectively to development. We have therefore

---

\* The International Development Institute and the International Development Corporation--the first to be concerned with technical cooperation, the second with development loans--are intended to succeed the Agency for International Development.

carefully studied the proposal for establishment of a separate International Development Institute, as one possible means of accomplishing these objectives. This report contains our suggestions for the functions and mode of operation of such an organization, if it is established.

Conditions in developing countries have changed dramatically since foreign assistance programs were initiated after World War II. Most developing countries have made impressive gains in recent years, thanks in part to the assistance the United States has given them. Other industrialized nations are continuing to strengthen their own assistance programs and multilateral development institutions have begun to play increasingly constructive leadership roles.

Still, there is little reason for complacency. Economic growth in the developing countries has not brought much material betterment in the lives of the world's poor. Poverty, illiteracy, disease, and malnutrition are still too often the rule, and rapid population growth threatens to destroy all hopes for significant improvement.

We as a nation cannot close our eyes to these problems abroad any more than we overlook similar ones at home. Nor can we ignore the fact that we often know far less than we must, even with respect to the applicable technology, about how to help solve them.

For nearly a generation technical assistance to the less developed countries has emphasized the application of existing knowledge and techniques to meet many of their immediate, pressing needs. The ready answers to their problems have largely been spent. The leaders of both developing and developed countries now perceive that what is not known about development is far greater than what is known and that without great increases

in knowledge and in the ability to apply it wisely and effectively, the future of much of the world's population holds little promise of improvement. The committee submits, further, that what the United States does abroad, and what it learns in the process, will produce insights and understanding that will help in the solution of some of our domestic problems.

Public consciousness has awakened to the staggering problems of population growth; but the economic, technological, and social means for controlling it are still not at hand. Massive unemployment, with its potentially disastrous effects, is only beginning to receive critical attention by political leaders and the professional development community. The success of the Green Revolution has postponed the immediate possibility of famine in many parts of the world, but its social and economic consequences are sources of much disquiet. Looking forward to the longer future, we perceive what may become mankind's most serious global problem--how to satisfy human requirements for material well-being without so depleting our planet's resources and so disrupting the environment as to render the earth inhospitable to human and other life.

These are complex, socio-technological problems that affect all nations, even the most affluent ones. They will require global attack if their consequences are to be averted.

A separate International Development Institute, by marshalling American scientific and technological resources in a few urgently important areas, could play a vital role in alleviating some of these global problems. It could be the leading U.S. government agency for finding and applying knowledge in the attack on world poverty. The

primary role we envision for it is to make possible an important extension of the base of knowledge and competence necessary for solving, in time, several most critical problems.

This task requires an institution different in concept, character, and purpose from any that has preceded it--one with the ability to mobilize the great capabilities of universities, research institutions, industry, and service organizations, and to employ this nation's managerial and technical resources in novel ways to help achieve effective solutions to critical problems.

Our concept of a landmark agency appropriate to this task is based on the assumption that the United States would prefer to treat at least one part of its overseas development effort as an opportunity for important innovation. We believe that the development and dissemination of knowledge within a limited number of high priority areas is a mission of great potential impact in which the United States holds a comparative advantage. Not only is less money required to achieve significant results, but the need for development and dissemination of critical knowledge seems, relatively speaking, far greater today than the need for massive capital transfers. No institutional means adequate to the technological task now exist. At a time of high competing demands for resources and a low national will to promote overseas development, it is still possible in this way to take a historic initiative to improve the quality of life in developing countries. Furthermore, as America increases the intensity of its attack on hunger, ignorance, and disease at home, it can learn much from a systematic, large-scale attack on similar problems abroad.

The essentials of our recommendations are:

A. The International Development Institute should:

1. Mount intensive attacks on knowledge gaps in a limited number of critical high-priority problems--such as hunger and malnutrition, unemployment, and rapid population growth--whose solution would have a beneficial impact on the developing world as well as on our domestic society. In its mission to generate new knowledge the IDI should (a) identify a small number of key, clearly defined, and potentially attainable goals, (b) formulate a systematic strategy for working with the developing countries to attain these goals, encompassing activities along the entire continuum of research-development-demonstration-diffusion, and (c) mobilize U.S. resources to carry out that strategy. It should collaborate with interested developed and developing countries as well as international bodies. Most of the IDI funds should be devoted to these activities. While the Institute's work should not generally extend beyond the demonstration stage of any new technology or system, it should, as much as possible, conduct its activities so as to stimulate the loans and other capital investments that may prove necessary to achieve stated objectives in the less developed countries.

2. Respond to initiatives from individual countries and to needs for technical assistance in areas outside the IDI's priority concerns. Wherever these additional purposes are to be served, the IDI should condition its assistance on the establishment of a jointly organized and managed foundation-type instrumentality.

3. Support private technical assistance efforts not financed under (1) above. The IDI should provide support and encouragement to those private institutions that have demonstrated ability to attract private U.S. funds and to work well with counterpart private groups in the developing world (in the spirit of the Inter-American Social Development Institute).

4. Provide support services--primarily, but not exclusively, on a reimbursable basis--designed to make U.S. technical resources more readily accessible to the developing world over the long run. These services should include training of foreign nationals and assistance in providing individual and institutional expertise.

B. The IDI should have the following characteristics:

1. It should be a permanent, independent federal agency governed by a board of public and private members appointed by the President, the Director to be confirmed by the Senate.

2. It should be the principal agency for U.S. civilian technical cooperation, responsible for our multilateral obligations in this field, as well as for our bilateral activities. It should be the source of policy guidance and U.S. funds intended for the United Nations Development Programme and other international technical assistance programs.

3. It should have assured continuity of adequate funding, by means of a Special Fund that combines biennial congressional appropriations and repayments on past aid loans. This Fund should be authorized initially at a \$1 billion level, with periodic review of the authorization ceiling.

4. It should operate essentially as a management and funding agency, marshalling intermediate organizations to carry out the bulk of programs A-1 through A-4 above.

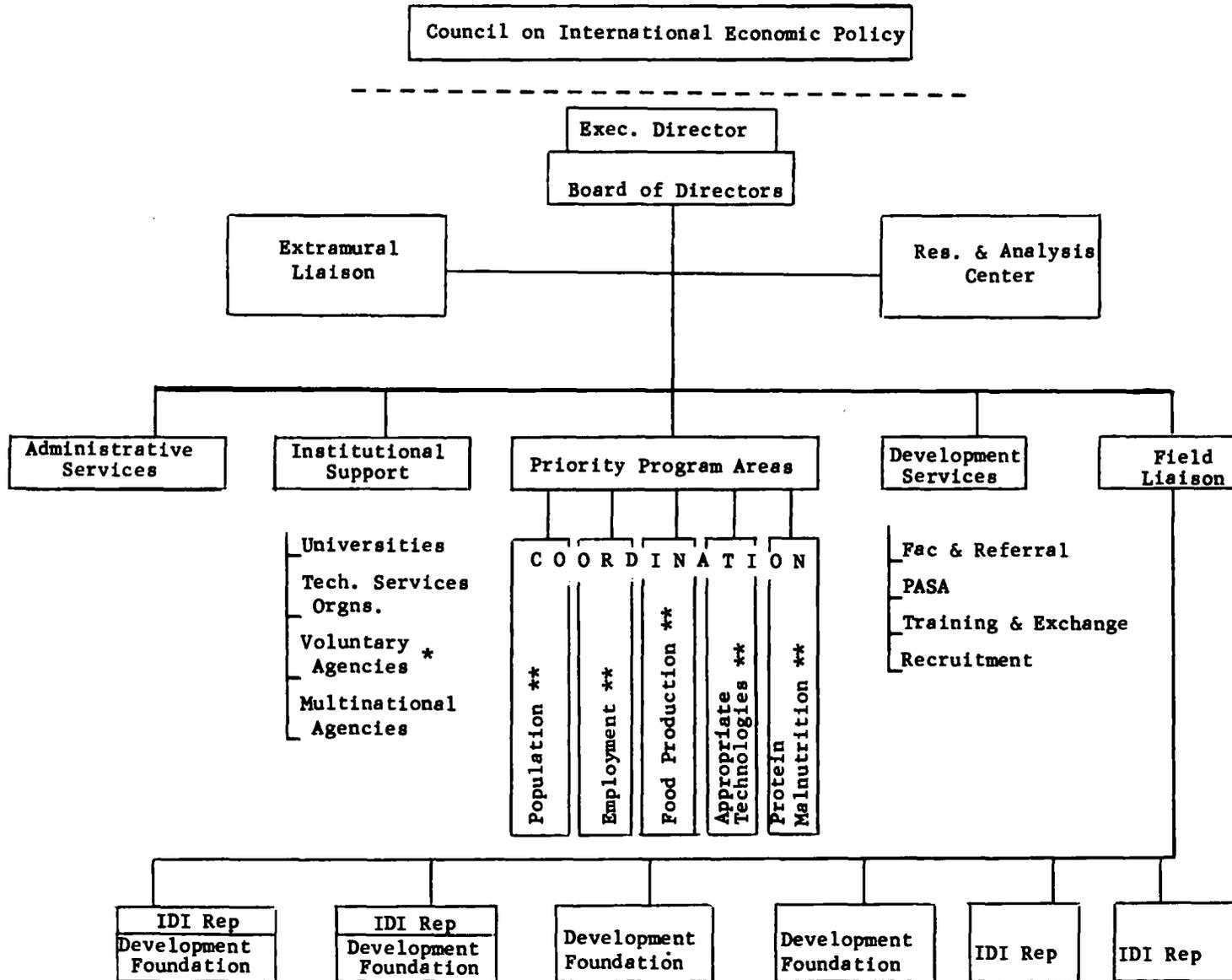
5. It should have freedom to arrange unique and unconventional modes of operating with intermediate institutions. Institutions receiving IDI grants and contracts might include universities, federal agencies, technical and voluntary service organizations, and private enterprises, both here and abroad. The Institute should strengthen or create new high-quality institutional capacities as circumstances require.

6. The IDI will need a small, top-quality staff capable of (a) providing strong policy and program direction; (b) analyzing problems, defining programs, and assembling program elements; (c) supervising and coordinating implementation of these programs; and (d) providing follow-through for evaluation and utilization of results. This function should allow for a sharply reduced official overseas presence, and a considerably smaller bureaucracy at home.

7. The IDI should have at its command a first-rate multi-disciplinary facility for development research and analysis. This should be primarily policy-oriented but should be able to include some experimental research capabilities if these are lacking elsewhere. This unit should also serve other U.S. agencies on request.

The following diagram suggests the relationship among the program elements we envision for the IDI.

IDI PROGRAM ELEMENTS



\* with development-related field activities

\*\* Illustrative only. Each priority area to be aided by a high-level international advisory panel.

## CHAPTER I

### REQUIREMENTS FOR THE 1970's

The proposal to establish an International Development Institute rests on the conviction that many conditions of human life can be improved by the effective application of socially purposeful science and technology. Experience both in the United States and in other countries shows that an experimental approach is needed in designing institutions and programs to deliver the fruits of technology. The range and variety of technological skills and capabilities and the large numbers of highly trained specialists in the United States give us a special opportunity to contribute to the developing countries by enlisting a portion of these skills and capabilities.

How can American experience be brought to bear to improve the quality of life in the less-advantaged countries? How can the United States best assure itself that its efforts to help with these problems will introduce palpable benefits in the societies we are attempting to assist? How can the work of many specialists from many different institutions be integrated into a coherent, purposeful program of separate but reinforcing elements of research and development? And finally, how can American resources of knowledge, skill, and developmental experience become available to progressive leaders in other countries without creating an intrusive and self-defeating American presence abroad?

We have, in this report, attempted to describe an institution that would meet the criteria implicit in these questions. Such an institution

should not take as its province all problems of development, or the total range of science and technology. It should not maintain large numbers of employees overseas, nor should it attempt to devise comprehensive development programs for single countries. Rather, its primary mission should be to find imaginative and productive ways of focusing the tremendous scientific, technological and managerial capacity of the United States on a limited number of clearly defined, high-priority research and development tasks relating to problems such as hunger, unemployment, disease, and excessive population growth, and on the means for translating the results of its research activities into meaningful social and economic change. It should assign the highest priority to those activities that can be expected to contribute most to improving the quality of life of the poorest people.

This emphasis on greatly expanded, mission-oriented, problem-solving research and its application, conducted in and with developing countries, is very much in line with the evolution of international thinking as seen in the recommendations of the U.N. World Plan of Action, the Pearson Commission, and other recent studies. This emphasis has several merits:

- It takes advantage of America's considerable experience in mobilizing human resources in various combinations of public and private efforts for improving living standards.
- It builds on U.S. experience with successful mission-oriented research and development.
- It recognizes the growing technical strength of many developing countries and enables us to avoid the manipulative image

- associated with comprehensive country programs that require intimate involvement in the policy-making of other countries.
- It enables us to break out of the confinement imposed by working only with and through governments, removed from the individual citizens in developing countries.
  - It promises to deepen our insights into how to solve similar community problems--hunger, poor health care, unemployment--at home.

But if the IDI is to become--as the President has rightly demanded of all U.S. aid--a "far more successful investment in the future of mankind," it should possess characteristics that have too often been absent from our aid programs in the past--characteristics such as the following:

#### Permanence

First, the IDI will require staying power. Global community problems such as malnutrition and excessive population growth are not amenable to quick solution any more than are their equivalents in the United States. There are large gaps in our knowledge base. Even as these are filled, local institutions must be endowed with capacities to absorb and build on the new technologies. Problems of motivation and diffusion must be surmounted. If the IDI is to have a substantial impact on these complex and interrelated matters, it must be organized for the long haul.

The need for promoting and sustaining scientific and technical cooperation with the developing countries will remain long after the

need for concessional economic aid diminishes. While developing countries, with two thirds of the world's population, produce 12.5 percent of the world's goods and services (itself a measure of the enormous gap to be overcome), they support less than 2 percent of the world's research and development. Technical cooperation and professional, scientific, and technical relationships will have to be sponsored until such time as there is a better balance in the world's total research and development effort.

It is thus clear that for IDI's mission to be successful, its establishment on a permanent basis is a prerequisite. In order to enhance the IDI's image of permanence, we would further urge that it be given separate authorizing legislation to distinguish it from other U.S. aid instrumentalities.

### Independence

Permanent authorization is only one of the essential requirements, however. The IDI should be provided with the operational flexibility enjoyed by our private foundations. Foundations obtain their flexibility by virtue of two key characteristics--independence and assured funds. We believe that the IDI will require these characteristics as a sine qua non for operating flexibility, although we recognize the more stringent accountability requirements incumbent upon public bodies.

To emphasize its independent standing, the IDI should have a Board of Directors appointed by the President, drawn from within and outside the federal government, with a majority being from the private sector. The public members should be officials whose responsibility naturally impinges on those of the IDI--the Secretary of State, the

heads of the proposed International Development Corporation and the Overseas Private Investment Corporation, among others. The private members should be distinguished citizens having the esteem and confidence of important segments of the legislature and the public, and should include several persons highly knowledgeable about international technical assistance and closely related to the work of the major private foundations.

To enable the IDI to represent its concerns at the highest policy levels, the Director of the IDI should be a member of the President's new Council on International Economic Policy.

#### Assured Funding

The IDI also requires, within broad limits, the other essential characteristic of the private foundations--assured funding. Nothing would indicate more clearly the commitment embodied in the IDI than a decision by the Executive Branch and the Congress to fund it on a stable basis at a level adequate to sustain the requisite mobilization of U.S. talent and experience.

We believe that this purpose can be achieved through a combination of an assured financial base and periodic appropriations by the Congress. The best source of assured funds, in our view, is the dollars from past aid loans now coming due in increasing amounts. At current program levels,<sup>\*</sup> this "return flow" would account for over half of U.S. funds destined for technical assistance. It is not possible to predict the

---

\* Approximately \$400 million, including the U.S. contribution to the United Nations Development Programme.

absolute amounts that will be available in subsequent years, since these will depend in part on future debt reschedulings, but the flow is likely to increase for some years and to last into the next century.

Using foreign repayments to promote human betterment is an established American tradition. Well before the Fulbright Act, which reserved World War II lend-lease repayments for educational and cultural exchange, the United States made a point of using its Boxer Indemnity to provide educational opportunities to generations of Chinese. It would be entirely appropriate, in a similar spirit, to use receipts from loans of AID and predecessor agencies to underwrite, in part, IDI's program of international technical cooperation.

Loan reflows alone will not be sufficient to finance all of the IDI's program. In any event, we believe it is important to institutionalize periodic review of the IDI's effectiveness by the executive and legislative branches. We therefore suggest that Congress establish a Special Fund for Technical Cooperation authorized initially at the \$1 billion level recommended by the Peterson Task Force on International Development, and that it supplement the loan reflows to the authorized level by periodic appropriation. Our preference is for two-year appropriations of these additional funds, since this would permit greater flexibility in programming while still providing frequent opportunities for executive and congressional review and evaluation. The authorization level should be subject to periodic review by the foreign affairs committees of the Congress whenever a revised ceiling seems warranted and, in any case, no less frequently than every four years.

In order to provide the Executive Branch and the Congress with a

sound basis for judging its effectiveness, the IDI should be subject to an independent audit and be expected to prepare a well-documented annual report on the model of the best annual foundation reports. This should be appropriate and instructive for the interested public as well as the Congress, and should frankly discuss problems as well as successes, aims as well as activities, with an emphasis on providing a truthful and meaningful picture of what is being attempted. We believe that if Congress is convinced that full information is being supplied and reasonable progress is being made, it will not insist on the elaborate requirements for prior approval and other restrictions that have characterized aid legislation in the past.

#### Flexibility

The IDI will need to be responsive to changing conditions. In our view, this flexibility cannot be accomplished with a large, bureaucratic organization. If it is to operate with a minimum staff and retain organizational flexibility, the IDI should operate essentially as a managing and funding agency, in the manner of the major foundations. Rather than attempt to carry out its own program, the Institute should support or sponsor, through contracts and grants of various sorts, appropriate activities both here and abroad by universities, voluntary agencies, research institutions, consulting organizations, industrial firms, and public agencies.

Such reliance on intermediaries for program implementation will free IDI management for carefully targeted programming and give the Institute the ability it needs to tackle major intersectoral problems without acquiring a large and unwieldy apparatus. It will enable the IDI

to capitalize on the strength and variety of U.S. technical skills and knowledge in whatever combinations seem appropriate to the time, country, and subject matter concerned. The variety of viewpoints thus mobilized will help to keep the IDI alert to new opportunities and new techniques.

The IDI should also work with and through developing country institutions wherever feasible. Such a policy would serve to strengthen institutional capacities within the developing world in the best possible way--by using them--and would keep the IDI responsive to the needs and interests of its host countries. It would give the IDI the means to link itself with the growing network of international and regional research centers. It would add substance to the idea of development as a cooperative effort.

#### Institutional Support

Since we do not expect the IDI to conduct its own program of work, there will be a critical reliance on the Institute's ability to obtain and use the talent of outside institutions. In addition, the effectiveness of such organizations as the International Executive Service Corps, which have pioneered new patterns of development cooperation, will depend heavily on the nature of the support provided by the Institute.

To a great extent, the willingness of United States institutions to commit themselves to development goals will depend on the approaches and attitudes taken by the IDI. It is unrealistic to assume, for example, that institutions will make major investments in gearing their talents for development work if their planning horizon consists of ad hoc participation in single short-term projects not of their own design. The IDI must therefore be able to make commitments to its affiliated

institutions and organizations of such duration and scope as to warrant substantial commitment on their part.

Block grants, formula funding, general institutional support, and contracts of various sorts offer a range of funding possibilities that could be suited to different situations. Within any financial arrangement, the IDI should be able to commit funds for up to five years, to permit contractors and grantees to pay for local costs overseas as well as foreign exchange costs, to buy associated capital equipment, and otherwise to provide for flexible management. Some of AID's innovative activities relating to population problems already operate under such ground rules.

The other most important factor for the IDI's success will be the tenor of the IDI's relations with intermediary organizations. The IDI must consider affiliated institutions full partners from the start if their talents are to be fully engaged. The AID has begun a useful experiment with Institutional Development Agreements that provide co-signers with a greater part in program planning and greater responsibility for day-to-day project management. The IDI should devise additional techniques for ensuring smooth working relations.

#### Staff

In the interests of efficiency and flexibility, the IDI's staff should be kept lean. The staff should have the capacity (1) to provide the IDI with strong policy and program direction, (2) to undertake systematic policy planning and analysis, (3) to identify and evaluate emerging needs and opportunities, and (4) to mobilize a broad array of institutions and orchestrate their talents into a coherent whole.

It is particularly important that the staff have available to it a first-class research and analysis capacity, including both social and natural scientists, to assist it in these tasks. Development in the 1970's will require new forms of policy-oriented research that can systematically examine goals and policy options and provide guidance for operational decisions firmly based on technical, economic, political, and social factors. This key requirement is described more fully in Chapter V.

The IDI's own overseas staff should be small, manning IDI field offices or serving as staff members of country "development foundations" (see Chapter III). IDI-financed specialists working overseas should generally be employees of the institutions contracted with or supported by the IDI, whether U.S. or foreign, and not employees of the IDI itself.

We have considered the advisability of a career "international development service" for the IDI's core management staff. We have concluded, however, that the IDI does not require a tenured career service on the order of the U.S. Foreign Service to attract the types of men and women that it will need. The latest recommendations of the Civil Service Commission, drawing on the experience of the business world, tend to confirm the view that tenured career services inhibit intellectual and managerial vigor.

More important than a tenured career service, in our opinion, is the assurance that men and women interested in development careers will find sufficient outlet for their talents and upward mobility within the total realm of the U.S. development effort. Seen in this

light, the IDI, universities, voluntary agencies, research institutions, and private industry should provide, in varying combinations, the loci for satisfying individual careers in development activities. This will require that relevant, productive technical cooperation activities have continuity of support and, therefore, continuity of need for the services of high-caliber American personnel. We are persuaded that adequate, sustained funding of technical cooperation, combined with the appeal of the development challenge, will attract the competent and motivated individuals both to the IDI and to the many intermediate organizations (with their own individual conditions of service) on which the IDI will depend. We would be inclined to favor a flexible personnel system for the IDI, giving it great freedom in assigning staff, setting personnel qualifications, and determining salary levels.

#### Access to Capital

The IDI cannot stand aloof from sources of development capital. Most successful research and development efforts ultimately require major capital investments to produce measurable impacts for human betterment. For example, the high-yielding grain varieties developed through sustained international research (the Green Revolution) require irrigation systems, often new ones, and heavy applications of fertilizer, which must be imported or produced locally. In some instances, major investments will be made by developing countries on their own or by private foreign sources; in others, however, capital assistance will be necessary. While the IDI need not have direct access to development capital, there is much that it can do to help its beneficiaries identify capital needs, attract potential investors, and prepare loan requests,

especially if the IDI designs its own programs with this "pre-investment" function in mind.

The IDI should be able to bring strong professional and technological expertise to bear on matters relating to capital lending, as is suggested later in the discussion of the Development Research and Analysis unit (Chapter V). It will be particularly important for the IDI to coordinate its program carefully with that of the International Development Corporation, prospectively the chief source of U.S. development lending, and with the Overseas Private Investment Corporation.

#### International Coordination

The IDI will have to coordinate its work with other national and international organizations engaged in development efforts. All recent international reviews of development assistance have stressed the need for coordination. Such institutions as have emerged, however--consortia, consultative groups, and regional banks--relate largely to capital assistance, leaving technical cooperation to be coordinated at the recipient-country level, if at all. The result has not proved adequate to avoid duplication, overlapping, and ineffective programming. If, as we believe, there are key problems that must be tackled on a world basis rather than as a series of country programs, it will be all the more important to ensure that various research and development efforts are not fragmented and diffused. Indeed, the IDI should be ready to plan and fund jointly with others wherever possible.

The World Bank, together with other international agencies, has begun to establish machinery for joint consultation on financing of international agricultural research; the Bank will probably expand

this activity to other fields. The U.N. Development Programme is similarly modifying its structure and operation in hopes of inducing better integrated multilateral technical assistance and promoting coordination with bilateral donors. It is imperative that the IDI participate in and encourage these and other efforts to mesh and focus international scientific and technical cooperation at both policy and program levels.

In view of these international responsibilities, the IDI should be responsible for U.S. development policy toward international organizations concerned with technical assistance. In particular, the IDI, in consultation with the Department of State, should be responsible for providing guidance to the U.S. representative on the Governing Board of the U.N. Development Programme, and the U.S. contribution to that program should come from the funds made available to the IDI.

## CHAPTER II

### PRIORITY PROBLEM AREAS

In facing the development challenge, we have come to recognize that a number of problems common to most developing countries stand out emphatically from the rest, such as runaway population growth, protein malnutrition, large-scale urbanization, lagging and inappropriate forms of industrialization, and massive unemployment. These problems are now commanding growing attention.

They do not present themselves in neat, sectoral form. They are real-life, multi-dimensional issues requiring systematic and often simultaneous activity on many fronts. Thus, the problem is not "agriculture," but "What is required to provide adequate diets for large masses of undernourished people?" Not "labor" or "industry," but "How can unemployment and underemployment be reduced to tolerable levels at probable rates of economic growth in developing countries?" Not "family planning," but "How can countries adjust their rates of population increase to desired levels?"

#### Systems Approach

These and similar problems have major elements in common--complexity, variability, and large areas about which not enough is known. The IDI should devote a majority of its funds--and an even larger portion of its management effort--to developing the knowledge and institutions needed for tackling a few of these problems insofar as they are considered susceptible

to research and development. In pursuing this mandate the IDI should be guided by an overriding principle: it should assign highest priority to those efforts and activities which, if successful, are likely to improve the quality of life of the greatest number of people, and especially those in the poorest strata.

If its efforts are to have a measurable impact, the IDI must not confine itself to research and development in a narrow sense. Rather, it should take a "systems view" of the priority problems on which it chooses to concentrate, starting from identification of key problem-solving tasks and ending with adaptation, demonstration, and diffusion of new knowledge in individual country situations. This will entail the systematic, sustained application of substantial resources and a marshalling of talent from all appropriate disciplines in both the natural and social sciences.

The systems approach to developing knowledge and institutions would permit the IDI to take advantage of U.S. competence in goal-oriented research and the management of large mission-oriented undertakings involving a mixture of private, voluntary, and governmental instruments. It would put a part of America's exceptionally large pool of research facilities and scientific and technological manpower to work for the benefit of the international community.

The experience with the Green Revolution suggests the salient characteristics of the model we have in view: research to produce new high-yielding rice and wheat varieties, followed by demonstration of their growth potential in different countries, and finally large-scale diffusion of the technology for making the best use of the new varieties.

In this model, governments and aid suppliers, including local AID missions, carried on where the privately supported research establishment left off to encourage the spread of the new technologies. If the IDI were to select grain production as a part of its priority problem activity, we would expect it to develop a more consciously integrated program encompassing these activities and extending beyond them to such matters as storage technology, transport, credit and marketing systems. Furthermore, the IDI's concern should go beyond technological innovation. One important lesson of the Green Revolution is that consideration of the social consequences of technological change should be an integral part of any program, as should the implications of new technology for government policy.

### Criteria

In selecting the problems on which it proposes to concentrate--and these should be few in number at any given time--the IDI should be guided by the following general criteria:

- The problem affects most developing countries.
- Amelioration or solution would benefit large numbers of people.
- Significant aspects of the problem require intensive research and development.
- U.S. resources, actual or potential, have a special contribution to make.
- There are prospects for attracting needed capital resources when results warrant them.
- The capabilities and talents of other countries, developed and developing, and other institutions, national and international, can be coordinated with IDI efforts.

- A comprehensive broad-gauged effort can be mounted by the IDI and others.
- Benchmarks or targets can be identified to provide purposefulness and a sense of direction, as well as a measurement of progress.
- Insight would accrue toward the solution of a related problem in the United States.

Although a portion of IDI funds should be reserved for other important purposes, such as the support of country "development foundations" (see following chapters), the amounts allotted to each major problem area should be sufficient to mount a comprehensive, multifaceted effort that can be sustained long enough to produce a substantial impact.

#### Objectives and Scope

The IDI's main objective in each problem area it selects should be (1) to identify key "knowledge gaps," (2) to develop necessary new technologies and management tools, (3) to encourage the diffusion of new technologies through country-specific activity and by enlisting support of appropriate capital sources, and (4) to make a permanent addition in developing countries of institutions and personnel capable of self-sustaining problem-solving in the area concerned. Research efforts in developing countries should be seen as an important opportunity for institution-building. Many of the key institutions in developing countries still fall short of the capacity for self-sustained problem-solving research. The right kind of research involvement can be one of the most viable means for creating new institutions, for bringing about

appropriate changes in old ones, and for developing and retaining competent nationals within the developing countries.

The first task of the IDI's management staff will be to devise ways of analyzing each problem so that they can identify the most urgent problem-solving efforts and, among them, those which offer the best prospects for return on limited funds. This will demand extensive study, consultation, and weighing of alternative approaches. Planning and programming activities should make use of the most advanced analytical, management, and planning techniques, refining and adapting them to the requirements of development. It is essential that alternative strategies be considered and that priorities among tasks and activities be clearly identified. Priority problem activity should be a coherent, determined, and time-constrained set of related initiatives; not an assembly of discrete, plausible projects.

The IDI should not normally operate its own program. Activities under each priority area should be carried out for the most part through grants or contracts as appropriate, by such intermediate institutions as universities, research institutes, non-profit organizations, and industrial firms in the United States and abroad. Particular effort should be made to involve voluntary organizations such as the International Planned Parenthood Federation or the Cooperative League of the U.S.A., which work directly with private groups in developing countries on matters relevant to the priority problem areas.

IDI-sponsored efforts and activities in relation to each priority problem might include the following, in combinations varying as to content and locale:

- Research and experimentation (in U.S., multinational, and developing country research institutions);
- Technology development, including demonstrations, pilot schemes, and adaptation;
- Research on political, social, and cultural factors affecting innovation, and on socio-economic consequences of innovation;
- Research into appropriate in-country delivery systems;
- Policy advice to cooperating developing countries on innovations and applications;
- Relevant training;
- Relevant institution-building in developing countries;
- Evaluative studies.

Broadly speaking, IDI funding in any of the problem areas chosen for intensive effort should not extend beyond acquisition of the knowledge base, including demonstration of technological feasibility and planning for large-scale action leading to full innovation. But the IDI should attempt to help countries obtain necessary capital funds wherever possible.

From the outset, the IDI should attempt to identify specific benchmarks or targets that appear to be reasonably attainable, preferably within specified time periods. Identification of expected results is a useful programming device in itself; it also provides a yardstick for accountability as long as target dates are realistic and allowance is made for unavoidable slippages.

### Country Activities

Certain IDI activities in the priority areas can be conceived on a global basis, without particular reference to any individual country or set of developing countries. Aspects of research, for instance, can take place in various parts of the world, within various institutions working substantially independently of one another on problems relevant to a broad range of countries.

For the most part, however, IDI-sponsored activity in research, adaptation, demonstration, diffusion, and institution-building must relate to specific country situations. Since many of these activities impinge on the responsibilities of individual governments, the IDI will have to evolve ways to engage in cooperative or joint programming at the country level. Our suggestions regarding country-level activity appear in Chapter III.

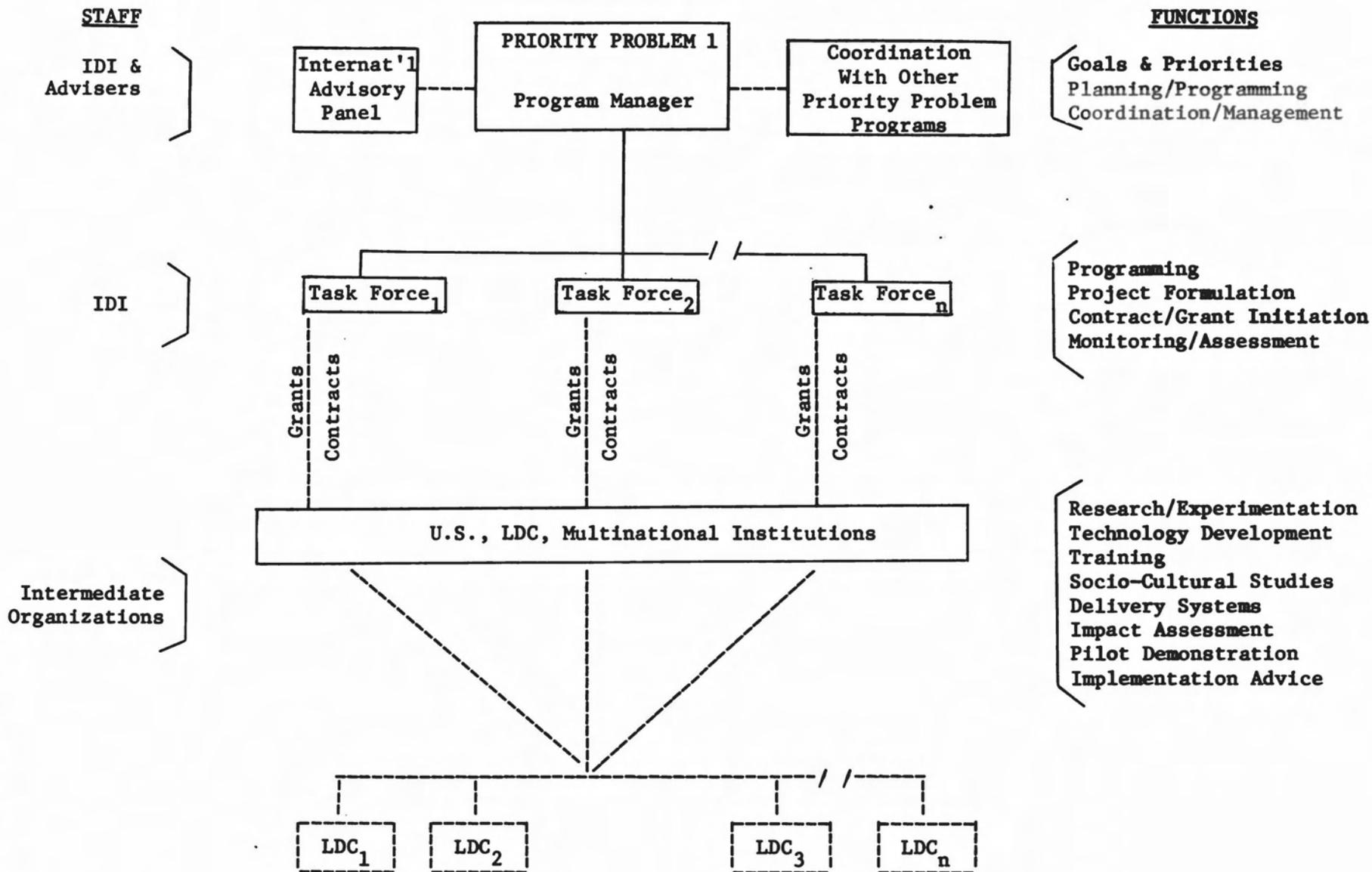
In order to use its limited resources to best advantage, we suggest that the IDI concentrate major activity relating to any one problem area in a relatively few key countries, at any one time.

Cooperating countries should be chosen on the basis of the priority of their need and their demonstrated willingness to mount substantial programs of their own in the area concerned. Priority-area activities undertaken by IDI-supported agencies like the Population Council would, of course, continue in many other countries as well, as would support for relevant research projects.

### Program Management

IDI's organizational structure for the prosecution of its priority programs should reflect the nature of its goals. As shown in the accompanying diagram, each priority problem area should have its own IDI

PRIORITY PROBLEM AREAS



management team and subsidiary task forces comprising all the fields of expertise relevant to the mission--development analysts, technical specialists, area experts, and supporting staff--and be headed by a broad gauge, very senior program manager. In addition to regular staff, each IDI team should be able to draw on specialists from the IDI's research and analysis staff (see Chapter IV) and on outside consultants. There should be close coordination of effort among the priority problem management teams. A high-level international advisory committee should probably be associated with each of these units.

This general approach will permit the IDI to match the size and composition of its staff to each problem's requirements, varied as necessary over time. It will provide an institutional setting for a two-way flow of information and ideas between the IDI and its intermediate institutions. It will force consideration of a variety of approaches in each area. Combined with an ongoing review and evaluation system, the approach seems to us to promise both efficiency and flexibility.

## CHAPTER III

### COUNTRY-LEVEL ACTIVITY

It is neither necessary nor practical for the IDI to work with every less-advantaged country in the world. But neither is it rational to assume that countries that are making considerable progress through their own efforts should be cut off from collaboration with the IDI. The IDI should selectively collaborate with the countries and institutions that can make the most effective use of their own resources and those of the IDI to pursue common development objectives.

#### Priority Problem Areas

The introduction and diffusion of new technologies may require institutional and operational arrangements--within individual developing countries--as widely different as the technologies themselves. Consequently, it is difficult to foresee the precise form and character of the linkage the IDI will need to fashion with each cooperating country in each priority problem area. There should be room for great variability and a readiness on the IDI's part to experiment with promising new combinations and arrangements.

In-country research, institution-building, training, demonstration, and diffusion will be carried out by public and private contracting organizations and agencies. To the fullest extent possible, the IDI should seek to enhance the capacities and performance of local institutions by involving them in joint efforts in pursuit of priority-area objectives.

Indeed a principal aim of in-country activity relating to priority problems should be to create or strengthen the requisite institutional base so as to enable the country to carry on self-sustaining research and innovation on these problems.

Where IDI-funded activities in any one country attain some magnitude or complexity, it will probably be necessary for the IDI to maintain a local presence of its own. Resident IDI staff should as a rule be small, limited to critical functions appropriate to its size. Resident or not, IDI representatives in the field should be charged with liaison with the host government and IDI contractor organizations, monitoring of grants and contracts entered into by the IDI, assurance of feedback to the IDI's central priority-problem management teams, and coordination of local IDI activities with those of other bilateral and international organizations. Final approval of proposed grants and contracts should rest with IDI headquarters.

In most developing countries, it should not be necessary for the IDI to maintain permanently resident staff. IDI-funded contractors whose fields of action lie within the priority problem areas will continue to operate in many such countries with support obtained directly from IDI headquarters.

#### IDI Response to Other Needs

We believe that the IDI should also have the capacity to respond to individual country needs and requirements that fall outside the IDI's priority problem areas.

The justification for this second, more diffuse category of IDI activity lies in the continuing need to assist developing countries in

strengthening, over the long term, their indigenous scientific, technological, management, and educational base for self-sustaining development.

These are important objectives, indeed complementary and in some cases a necessary pre-condition to those the IDI will pursue within its priority problem areas. Without adequate "receptor" capabilities in the developing countries--without their ability to absorb, build on, and renew socially useful technologies--popular participation and national self-reliance in development will be impossible to achieve.

Specifically, the IDI should work with interested developing countries for (1) human-resource development--that is, the education, in sufficient numbers and quality, of the necessary scientific, technological, educational, and managerial leadership cadres; (2) the creation, sustenance, or substantial improvement of higher education and research institutions that produce or employ such persons; and (3) the generation locally, with outside assistance as necessary, of the knowledge necessary for the most effective application of the countries' human and material resources for development.

IDI resources for such programs should be channeled in two ways:

1. Private technical assistance agencies and voluntary groups.

A number of American private technical assistance agencies and voluntary groups, such as the International Executive Service Corps, Volunteers for International Technical Assistance, and area-oriented educational and service organizations, have a history of effective collaboration with counterparts in developing countries. Subject to the criteria of high competence, continued relevance to IDI's principal objectives, and demonstrated capacity to enlist financial support from

the private sector, the IDI should be prepared to offer continued support to the overseas activities of such organizations by means of grants or contracts. The IDI should develop appropriate funding and monitoring formulas that will minimize the administrative burden upon itself and its recipients to sustain this relationship.

2. Development foundations.

Where the interests and capacities of both the host country and the IDI suggest that long-term collaboration is desirable on problems that fall outside the purview of the priority areas, we recommend that the IDI should make its response conditional on the establishment of a new joint instrumentality--the "development foundation." We have considered a number of alternative mechanisms to support continuing and diverse kinds of collaboration and we have concluded that the design described below is most appropriate to the purposes we have in view.

Each foundation should be organized under the authority of the U.S. and the host government by means of a special agreement outlining its functions and organization. The foundation itself should be an autonomous institution, able to receive proposals from and make grants to public and private institutions and individuals directly.

In making this recommendation, we have drawn on the organizational and operating characteristics of the successful Sino-American Joint Commission on Rural Reconstruction (JCRR). Admittedly, that Commission's substantive mandate involves more comprehensive programming and larger expenditure than we envision for the development foundations. But the JCRR's essential characteristics have relevance for our purposes:

(1) substantial autonomy, (2) use of intermediate institutions in the

public and private sector to carry out its program, (3) ability to deal directly with the private sector, and (4) leadership in both the governing board and the management staff entrusted to host-country nationals.

It bears noting that the Congress has annually, since the Foreign Assistance Act of 1966, authorized the existing aid agency to set up further commissions on the model of the JCRR, specifying majority control by host-country nationals. We believe that the IDI should heed this expression of Congressional approval and make the development foundation a key element in the proposed new technical assistance effort.

The development foundation has a number of potential advantages:

- It shifts a large measure of initiative and responsibility for problem definition, proposal formulation, and project management to the new generation of increasingly competent and self-confident leaders and officials in developing countries.\*
- It removes from the IDI the burden of administering a large variety of relatively small local projects, with consequent savings of both time and personnel.

---

\* The proposed development foundation is akin in spirit to the industrial development banks established with AID capital contributions in developing countries, in the sense that these funds are managed by host-country nationals subject only to general AID review and approval of major investments. A variant of the foundation concept proposed here was elaborated in a report, The Future of U.S. Technical Cooperation with Korea, by the National Academy of Sciences to the AID, November 1969.

- It allows for response to needs and problems in both public and private sectors.
- It emphasizes collaboration on scientific and technical merits anchored to development criteria, and provides insulation from the vagaries of political relations between the two governments.
- It is potentially able to include participation by other sources of development aid.

This foundation appears to us a flexible device for long-term collaboration. It is equally appropriate for countries such as Taiwan, requiring assistance in limited categories and where needs for concessional assistance are largely absent, as for countries such as India, whose needs for concessional assistance are large and varied.

Within the scope of its primary mission--that is, strengthening indigenous training and research capabilities--we believe the development foundation should have these further purposes in view:

- To provide private and public institutions a continuing avenue of access to the scientific and technical resources of the United States (on either concessional or reimbursable terms);
- To permit long-term professional linkages among education, technical, and research institutions engaged in cooperative development ventures;
- To strengthen local understanding of, and receptivity to, the new technologies being developed within IDI priority problem areas, and to strengthen the educational and research apparatus that will permit the more rapid assimilation and

diffusion of these technologies;

- To foster new ideas and innovative projects through prompt and flexible responses to proposals emanating from local public and private sectors;
- To coordinate its technical assistance with that of other bilateral and multilateral agencies.

The development foundations should seek to balance local initiative and responsibility with concentration of resources on a few priority areas. Admittedly, this balance is difficult to achieve and maintain, but the experience of businesses and private foundations suggests it can be done through conscientious consultation among professionals in the executing organizations and the central funding source.

They should strive to combine concentration of their resources with continuity of effort. Most projects worth doing--for example, developing new educational and research institutions--require sustained effort over five or ten years or longer. Scattered projects are almost certain to waste resources.

The essential elements of the foundations we envision are these:

- The foundation should be governed by a board of directors nominated and mutually agreed to by the U.S. and host governments. Binational governance is intended to assure that initiatives and responsibilities of the host country, as well as those of the United States, are fully represented. The participation of a senior IDI official in the governance of each foundation would ensure full communication between the IDI and the foundation without prejudice to its autonomy.

- A small, professional executive staff should be chosen by the board of directors. The board should freely recruit personnel from the host country and the United States as required.
- The foundation should be able to receive funds from one or both governments\* (and from other sources) on the basis of a planning budget. Its local character and autonomy would facilitate the financial participation of other donors and permit its evolution from a binational to a multinational institution. This transformation should be encouraged, with appropriate adjustments in the foundation's governance, management, and operations.
- The foundation should be free to make grants and enter into contracts for research, training, and experimental projects or to supply technical services in response to requests of public and private institutions, in keeping with programs and budgets authorized by its board of directors. In the majority of cases, grants and contracts would be entered into directly with local institutions in the host country, but the foundation might also make grants and contracts with American or international organizations working directly in the country.
- The foundation should be able to obtain technical inputs from the United States via IDI support services (see Chapter V), or by contracting directly with supplying organizations.
- The operations of the foundation should be subject to review by the sponsoring governments through periodic budget requests and

---

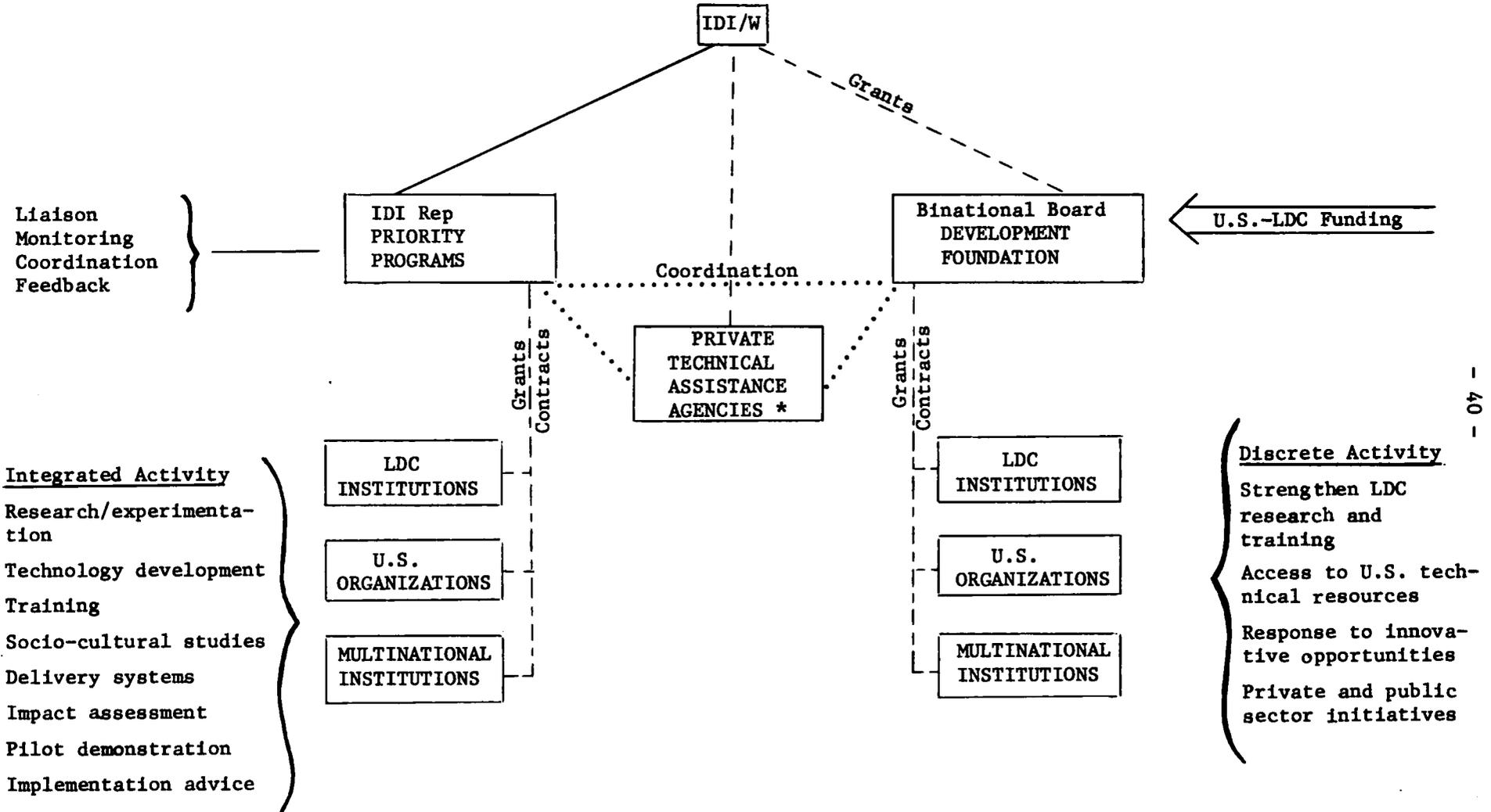
\* In varying ratios according to host government's ability to contribute.

through regular audit according to international accounting standards, in line with the practices of businesses and private foundations.

A question arises concerning the involvement of the development foundation in IDI-sponsored priority-problem activity. On the whole, we consider it important to preserve the limited character and purposes of the development foundations as we have described them. In smaller countries, it may be possible for the IDI to delegate certain responsibilities for IDI-funded activities relating to priority problems to the local development foundation or to the senior American in the foundation. Elsewhere, however, as we have suggested at the outset, the IDI should maintain its own staff in the field.

In sum, as shown in the accompanying diagram, we envisage that three types of country-level activity will be supported directly or indirectly by the IDI: (1) activities of intermediary institutions relating to priority programs under government-to-government agreement; (2) activities undertaken or sponsored by binational development foundations; and (3) activities carried on by private U.S. technical assistance agencies supported in whole or in part by IDI funds. The number and mix of these activities would, of course, vary from country to country. We do not believe that a formal mechanism for coordination among these is necessary (any more than is now the case for the activities of U.S. government, private foundations, and voluntary agencies in any one country). We would expect, however, a good deal of informal coordination and liaison to take place as a natural process.

COUNTRY-LEVEL ACTIVITY



\* with development related field activities

## CHAPTER IV

### DEVELOPMENT RESEARCH AND ANALYSIS

Previous aid agencies have been handicapped by the inability to examine goals and policy options systematically in order to provide a basis for operational decisions. The creation of a new agency provides an opportunity to remedy this deficiency, at least with respect to technical assistance where the lack of useful analysis has been most pronounced.

In our view, the IDI must have available to it certain essential capabilities:

- To improve existing knowledge of the development and modernization processes. In contrast to our improved understanding of the relationship of fiscal and monetary policy to economic growth, our knowledge of the dynamics of social development, institutional growth, human resources development, and technological change is still too limited for rigorous analysis and effective programming of technical assistance.
- To identify emerging problems and opportunities. The complexity and changing nature of the development process requires a continuous and concerted effort to identify new fundamental problems and to analyze their dimensions and implications. In short, a "look-out" function is envisaged that alerts and informs the development community of new challenges and opportunities.
- To analyze alternative assistance strategies. Research and analysis are needed to help choose among priorities, identify

the range of assistance tools and resources to be marshalled, indicate potential results, and define policy implications. This effort should yield innovative insights and approaches that would help guide the overall efforts of the IDI and provide useful inputs to the specific program areas.

- To improve analytical and programming techniques for technical assistance. Application of new analytical and management techniques such as systems analysis, programming-planning-budgeting, and PERT charting could significantly enhance the effectiveness of our technical assistance efforts. Substantial work is required to adapt these techniques to development purposes, however, and additional techniques need to be devised.
- To analyze and integrate the findings from experimental assistance projects. Despite the experimental nature of most assistance projects, the past aid apparatus has generally failed to obtain and apply information from these experiments to improve its subsequent efforts. It should be a matter of priority for the IDI to develop methods and mechanisms for analyzing the results from experimental programs, integrating the associated findings and experiences, and deriving guidelines and principles for more effective and efficient assistance projects.
- To encourage continuing interest in development research in American universities and other centers. The present aid agency has sponsored and funded a number of external research centers that have added importantly to our capacity for economic, particularly macroeconomic, analysis. Some of these centers and others with

general development concerns deserve continuing support, since their research findings frequently have implications for development policy.

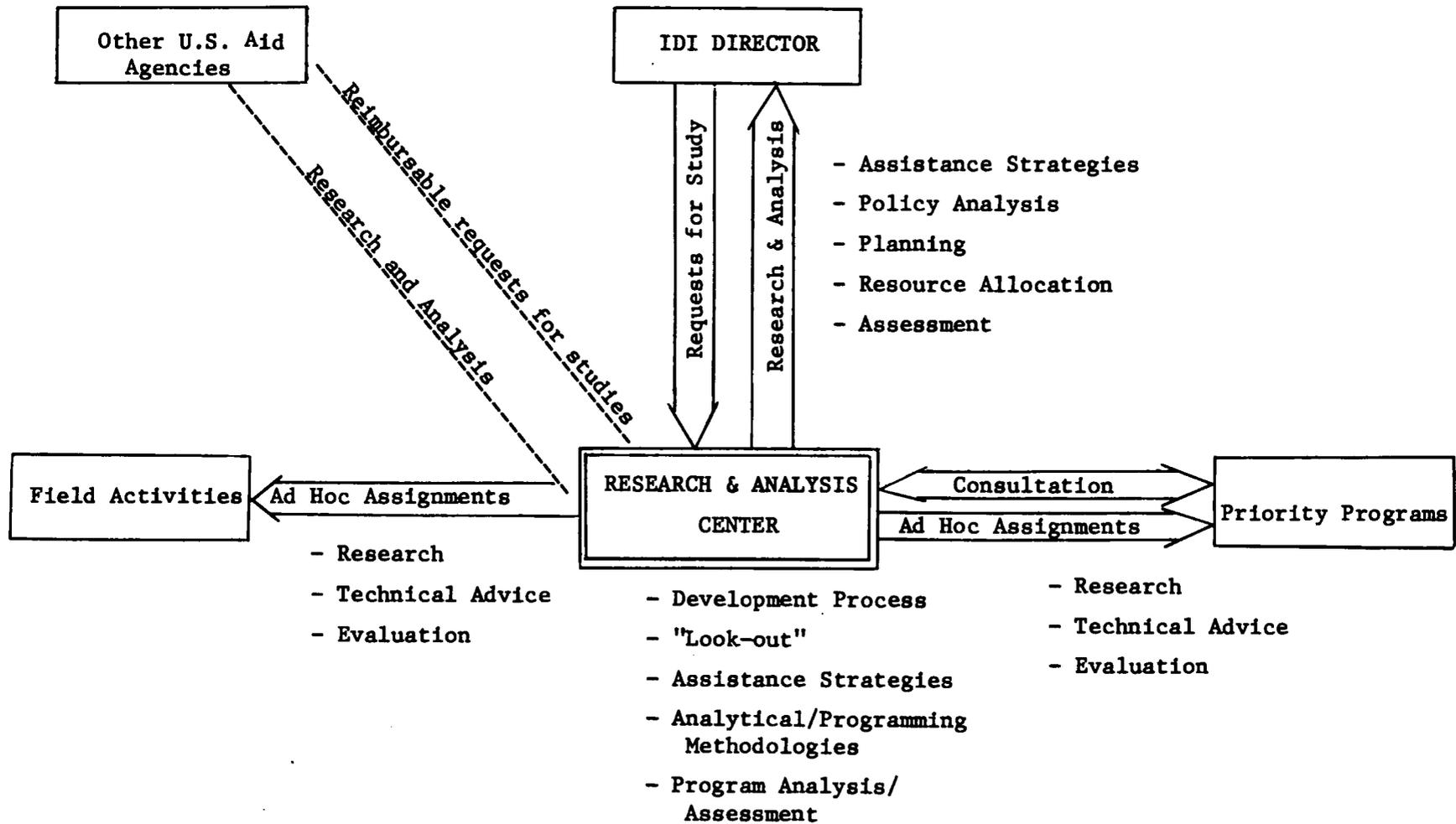
While some of the capabilities we have described exist in the academic community, the larger concerns of that community have tended to preclude the kind of concentrated, multidisciplinary, policy-oriented effort we believe is necessary. We recommend, therefore, that the IDI establish a research and analysis center of its own, as a distinct entity, which could provide IDI management with the kind of analysis and advice it needs to develop innovative and effective programs. The accompanying diagram illustrates the relation that we envision such a center would have to the other major parts of the IDI.

The research and analysis center should possess:

- A "critical mass" of highly competent natural and social scientists who can work together in interdisciplinary teams to study the technical, economic, political, and social aspects of development problems;
- Ability to concentrate full-time on research and analysis, without major managerial or operational activities;
- Ability to choose its own staff and assign them flexibly;
- Work conditions that ensure independence and objectivity of analysis and advice.

We believe that such a center will best serve the long-term interests of the IDI if it is empowered to undertake projects of its own selection, in addition to responding to requests from other parts of the IDI. This

DEVELOPMENT RESEARCH AND ANALYSIS



measure of initiative is likely to be necessary to obtain staff of the required quality.

We estimate that the IDI's research center would require a staff of top-quality scientists, engineers, economists, sociologists, development planners, and other related specialists. Most of the staff should be given relatively long-term appointments, but provision should be made for some shorter-term appointments of "visiting" experts and scholars. Staff members would be engaged primarily on their own projects, but they should also be available for ad hoc assignments to other parts of the IDI to provide research, advisory, and evaluative services. By and large, the center should have the in-house competence to perform its major functions; but it should also be able to contract for outside consultative and/or research services. Where outside capacities are lacking, the IDI may find it advisable to acquire limited experimental competence.

We assume that the quality of the research staff and the range of its capabilities will make the center's services highly attractive to other U.S. agencies engaged in development assistance, and suggest that the center be authorized and encouraged to serve others on a reimbursable basis.

#### Possible Joint IDI-International Development Corporation Sponsorship

We have considered the possibility that the research center envisaged here could usefully be transformed into a facility jointly sponsored by the IDI and the IDC. Although we have declined to make a formal recommendation to that effect--since the characteristics of the IDC lie outside the area of concern assigned to our committee--we

recognize that such a step would have some distinct advantages:

- It would constitute a known and visible resource of policy analysis and advice to the entire development community.
- It would create a link between capital and technical assistance without compromising either.
- It would have the potential for inducing a measure of program coordination between its parent agencies through its consideration of the technical and capital implications of specific problems and alternative strategies for responding to them.
- It would economize on scarce professional and analytical talent.
- Finally, it would enable the facility to perform a most important function, in the past only rarely and fitfully accomplished in the depth and scope that our role in development demands-- namely, to undertake timely re-evaluations and re-assessments of our total and component assistance efforts. These reviews could consider basic premises and goals, policy and program directions, problems and obstacles, progress and achievements, and impacts and accomplishments. Such reviews would provide the authoritative feedback needed for intelligent adaptation and evolution of our programs.

## CHAPTER V

### DEVELOPMENT SUPPORT SERVICES

In the course of its own programming, the IDI will necessarily become an important storehouse of information on the technical capabilities and resources of American institutions, organizations, and individuals. Further, to provide IDI representatives and country development foundations with appropriate stateside backstopping, the IDI will need to develop both in-house and external capacities for such service functions as identification of sources, referral of requests, facilitation of transactions, recruitment of experts, placement and training of students, and procurement of equipment.

These "support services," if made accessible to others, could add a significant element of strength to the total U.S. development effort. They would facilitate wider use of U.S. scientific and technical expertise by institutions in developing countries and, since the IDI will need to develop these essential capacities to support its own operations, they could be made available at relatively little additional cost.

This new service to the development community could be performed on a largely reimbursable basis. Costs associated with services provided to the IDI program elements could be charged to their budgets. For others, the IDI could establish a search and processing fee schedule for users, though charges might be varied according to ability to pay. This formula would serve to reduce the burden of maintaining somewhat larger facilities than the IDI would otherwise maintain and would introduce a market test of the value of the IDI support services. As long as they do not become excessive,

unrecoverable costs should be considered as justified by the IDI's central development mission.

Sources of Demand

IDI should be prepared to entertain requests from the following sources:

- IDI country representatives, development foundations, and problem-area programs. Backstopping of the IDI's own operations will constitute an important part of the task. The activities of development foundations will generate demands for such services as establishing institutional linkages, supplying experts and advisers, investigating educational and training opportunities in American institutions, and purchasing equipment and services. Similarly, the problem-area programs and contractor agencies may seek assistance, especially for arranging training programs and identifying specialist personnel.

- Other U.S. development agencies and organizations. The International Development Corporation, the Inter-American Social Development Institute, the Overseas Private Investment Corporation, the Department of State, and other aid-supplying agencies in the public sector, and foundations and voluntary agencies in the private sector, will also find considerable use for the IDI's services, especially for identifying and locating personnel and capabilities.

- Public and private sector entities in developing countries. The IDI should be prepared to help developing countries, whether or not they are recipients of U.S. concessional aid, to procure technical services on the American market at their own expense. Where it serves U.S. interests, this assistance might include salary and other topping-up subsidies to encourage procurement of American technical resources.

- Multilateral agencies. The servicing of the multilateral agencies remains a continuing U.S. obligation and should fall within the IDI's mission. At present, significant salary differentials may pose an impediment to service by private-sector Americans under U.N. auspices. Similarly, the widening gap between U.N. fellowship support rates and actual costs are making U.S. institutions increasingly reluctant to accept under-financed U.N. fellows for training. To redress this situation, the IDI should be able to provide salary topping-up to induce U.S. citizens to work for the U.N., and supplementary grants to cover extra costs of U.S. agencies and institutions receiving U.N. fellows for training.

IDI Support Services--Capabilities and Activities

The IDI support services should encompass the full range of capabilities and activities required for backstopping its field operations. Only a few of these, however, will be in demand by external users.

- Identification/locator. An identification/locator network of U.S. resources carries great potential benefit for the international development community. The IDI should contract with, or encourage, appropriate federal agencies and professional, academic, voluntary, trade associations, or specialized councils and committees to systematize their rosters and directories, establish qualification standards, and maintain current information on resource availabilities. It should support or maintain in-house essential locator facilities not provided elsewhere. The IDI would then be in position to provide, on request, lists of qualified institutions, individuals, and firms that offer pertinent technical services.

- Recruitment. The IDI will recruit Americans only for its own

posts at home and abroad. All others whom it might locate and encourage to work abroad should be recruited and employed by the organizations they are to serve.

The IDI should have funds to supplement salaries paid by developing-country institutions according to local scales in order to bring the total up to prevailing U.S. norms. This procedure would allow Americans to enter into direct employment with these institutions without such supporting amenities as official U.S. housing and commissary privileges.

- Training. Programs involving short- and long-term courses, in-service training and university education of participants from Asia, Africa, and Latin America have been financed by the AID for many years. The level of activity in this area has been large: over 150,000 foreign nationals have received some training under U.S. aid programs either individually or through specially organized courses. The flow of trainees sponsored by IDI program elements and others is likely to continue in the future, and the IDI should plan to support appropriate contractors to provide programming and orientation services.

- Technical information. The transfer of scientific and technical information to developing countries must be a major concern of the IDI. Other than some modest but nevertheless useful efforts by the AID, there is little precedent to suggest the kinds of information transfer programs or processes that the IDI should institute or encourage. It should be recognized by the IDI that, as developing countries acquire problem-solving capabilities of their own, their needs for scientific and technical information from abroad will become relatively more important than their needs for resident foreign experts.

- Procurement. Procurement of equipment related to technical cooperation projects is another element of the backstopping services of the IDI for its problem-area programs and field units. It might be desirable to limit this service, as much as possible, to IDI-related institutions.

## CHAPTER VI

### INSTITUTIONAL SUPPORT

In the previous chapters, we have outlined in broad terms the major new structural elements we envision for the IDI--priority problem areas, technical assistance foundations, a research and analysis center, and development services. It remains to discuss the form and style of IDI relations with the intermediary institutions and organizations that will undertake the majority of activities in these problem areas.

Since the IDI will not implement its own program of work, it will necessarily rely heavily on its ability to enlist outside institutional talent. If the IDI can arrange mutually supportive relations with universities, service and business organizations, and voluntary agencies, it will be successful; if not, it will fail.

The experience of the present aid agency suggests that working through other institutions is not easy. Although the AID has moved over the years toward operating its projects overseas through intermediaries, it has yet to evolve fully satisfactory working relations with them. Contractors have found it extremely difficult to work within the constraints that the AID has felt it necessary to impose with regard to both project formulation and day-to-day program management. It is extremely important that the IDI start afresh in its relations with cooperating institutions, so that they can be made full partners in its enterprises from the start.

The IDI's ability to evoke essential institutional support will depend on two sets of conditions: one set treats the institutions to be

affiliated with the Institute's program; the other treats the IDI itself.

As to the first, affiliated institutions must be in a position to provide the quality and specificity of services required. They must have or must develop both professional and technical competence and the institutional competence to perform effectively in the milieu of developing countries. Too frequently, one or the other of these competencies is lacking.

The expansion of the American pool of international development manpower will be a long-run and continuing endeavor for which the IDI must take a measure of responsibility. The IDI will have to work closely with education and training institutions in this country to produce professionals possessing the specific mix of abilities required. Such individuals should be concerned not only with problem-related development work abroad but also with the strengthening of the affiliated institutions themselves.

In the case of universities and research organizations, there is the additional problem of the depth of their commitment to overseas development goals. It is proper for these institutions to have primary educational or research objectives relating to the larger purposes of their activities; yet, for purposes of technical cooperation, there must be a correspondence between these objectives and those of the IDI. Only if such a correspondence exists will the institutions develop the kind of commitment essential to a long-term development effort.

In significant instances, U.S. talents have not been fully available to the cause of international development because of deeply ingrained concepts of their traditional mandate. The historic inability of the U.S. agricultural research establishment to utilize more than a small fraction of its tremendous scientific capacity in the solution of problems

of developing nations is a case in point. That establishment's unswerving dedication to the well-being of our domestic agriculture has been the primary source of its past strength; but this same dedication, along with legal and budgetary restraint, constitutes a significant reason why agricultural research institutions have not been able to make a greater, sustained commitment of their scientific capability to international development problems. Clearly, then, some cooperating institutions will need to redefine their own roles and responsibilities in terms of wider U.S. interests. They must come to consider participation in overseas endeavors as compatible with their primary objectives, as well as being rewarding and exciting, if they are to become effective contributors to overseas development--and the IDI must help them do so.

For reasons of shortage of appropriate personnel, lack of institutional capacity, or lack of initial predisposition, many cooperating institutions will have to invest time and resources in acquiring broader, more relevant capabilities. Their willingness to do so will, in turn, depend greatly on approaches and attitudes taken by the IDI. It is unrealistic to assume that institutions will be either able or willing to make the investments necessary to adapt their inherent capabilities if their planning horizon consists of ad hoc participation in single short-term development projects. In this situation, their sense of commitment will also be ad hoc.

But given reasonable assurance that the institution will be involved in a meaningful, long-term way in the IDI's mission, it can be fairly assumed that requisite investments in staff development, knowledge acquisition, and program elaboration will be made. Considerations of efficiency and

responsibility thus dictate that the IDI seek to affiliate a number of the most capable institutions with its program over the long run, and to provide them with sustained support.

### Funding Mechanisms

It follows that the IDI must be authorized to develop and use a series of funding instruments adaptable to the multiplicity of situations it will encounter and the institutional services it will require. These instruments will range from formula funding and block grants to research and other contracts. The objective in each case must be to evolve a format and style of interacting with affiliated institutions, in a spirit of mutual trust, that will call forth the best services and talents they are capable of providing.

In some cases, it will be possible to draw up a definitive set of specifications concerning the service required, the quantity and quality of inputs, the time dimension, and the like. There, the traditional detailed contract of the type presently in use by the AID may be the most desirable and efficient instrument for the IDI to employ. Certain institutions would find such contracts particularly suitable for providing "packages" of services.

In other cases, however, the traditional contract is not a useful instrument. Such tasks as basic and adaptive research, institution-building, and many other country-level activities are likely to defy ex ante, detailed specification of inputs and outputs or the process by which the one is converted into the other. Since the processes involved are complex, are shrouded by much uncertainty, and involve many variables

that defy quantification, the IDI must be free to develop highly flexible instruments that permit signatories to:

- Study, jointly and in depth, alternative means by which an identified development problem might be resolved;
- Select the strategic course of action that appears to offer the highest probability of success;
- Develop and implement a cooperative program of work within the framework of the strategic course of action;
- Adjust the level and mix of resources and the program in ways that appear desirable as more information becomes available or as events dictate;
- Operate in a manner consistent with the structure and operational format of the institutions involved;
- Proceed with certainty of funding over a period of time consistent with that required to resolve the problem.

The AID has begun a useful experiment with Institutional Development Agreements embodying these principles. The IDI should seek to structure its relations with supporting institutions along these and similar lines.

#### Private Technical Assistance

The foregoing bears on the relationships of the IDI and those institutions on which it will depend for the implementation of programs and projects relating particularly, but not exclusively, to the priority problem areas.

There is another category of institutions to whose support the IDI should give serious consideration. These are the private technical

assistance organizations that have demonstrated their ability to attract private U.S. funds and to work effectively with counterpart groups in developing countries. Among them are the International Executive Service Corps, the Volunteers for International Technical Assistance, the Asia Foundation, and similar area- and service-oriented organizations.

The value of participation by such private bodies in the development effort has long been recognized. Their importance has been underlined by the establishment of the Inter-American Social Development Institute.\*

As we have noted in Chapter III, some of the private technical assistance groups--the Population Council, for instance--are likely to be funded through IDI priority program channels. For other groups whose work is less directly related to these major efforts but closely pertinent to the IDI's general mission, the IDI will need to develop appropriate means and criteria for providing general support funds.

---

\* The question of IDI's relation to the Inter-American Social Development Institute (ISDI) raises a special problem, since the types of programs the IDI will be authorized to fund will include the types envisaged for the ISDI. We note the Peterson Task Force recommendation that the ISDI should be absorbed by the IDI once the latter gets under way.

