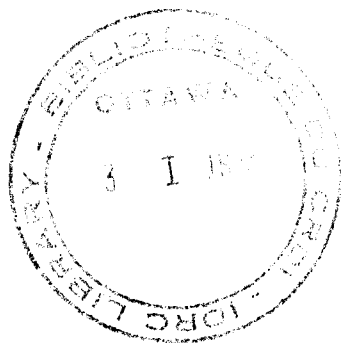DISCUSSION PAPER:

APPROACHES TO STRENGTHENING

RESEARCH INSTITUTIONS

Prepared by

Office of Planning and Evaluation

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Institution-building is an important theme in the development literature; and it has been the subject of policy discussion in IDRC over the past fifteen years. Except for the few cases in which it helped create international research centres, IDRC's contribution to institution-building has been an implicit rather than explicit part of its support for research projects in developing country institutions.

The literature and donor agency documents reviewed indicate only modest success in efforts at strengthening institutions. Although no approach has proven totally effective so far, experience has yielded valuable lessons for the practitioner. The first two sections of this paper provide background information; the third section summarizes some of these lessons.

Drawing on the literature and the Centre's experience, section 4 cites numerous examples of how project support alone can have negative effects on institutional capacity, and section 5 draws relevant lessons from Centre documents. The paper concludes that, in order to strengthen institutional capacity and thereby improve the outcomes of the research activities it supports, IDRC should consider support for activities less tied to projects, activities which address crucial institutional constraints. The final section (blue pages) defines "institution" and "institution-building" and presents two recommendations:

1. that general consciousness with regard to the need for strengthening institutions be raised throughout the Centre; and,

2. that project funding be supplemented by making longer term, coordinated support from different divisions available to selected institutions for research and research-supporting activities. This would be called Integrated Support for Research Institutions (ISRI).

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These recommendations represent two points within a range of possible institution-building approaches. Recommendation 1 may or may not require inter-divisional collaboration and could, in varying degrees, be reflected in many of IDRC's regular projects. Recommendation 2 calls for large scale, long term, interdivisional support for 4 or 5 selected institutions at any one time.

Since the innovation implied by recommendation 2 is much greater than that implied by recommendation 1, the paper concludes by suggesting some of the mechanisms through which full scale ISRI could be implemented.

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1.   INTRODUCTION

Over the last three decades, donor agencies have put massive resources into the creation and strengthening of institutions as part of their development programs. During the 50s and 60s, institution-building became a major preoccupation based on two related perceptions. One was that the basic difference between developed and undeveloped countries was the lack of certain kinds of institutions and that, consequently, there was a need for building more appropriate institutions. The second perception was that many of the problems experienced with development programs resulted from inadequate institutional capacity to plan and implement change; development program outcomes could be improved through the building of more competent institutions. These perceptions found expression in the early "transplantation" approaches by which aid agencies tried to establish institutions modelled on those in their own (northern) countries. One legacy of this era is that institution-building continues to be seen as primarily a macro-level, top-down process.

The Centre's approach has been quite different and has produced a concept of institution-building which is much less deterministic and more diagnostic. Strengthening institutions is an implicit part IDRC's funding strategy; project support has always been seen as a means of building research capacity, as well as a means of finding solutions to development problems. In a few cases the Centre has made creating or strengthening an institution the deliberate object of support. However, for the most part, institution-building has been a by-product of funding the direct requirements of specific research projects. The programs of the Information Sciences, Communications, and Fellowships and Awards Divisions have contributed through their funding of research-supporting activities.

Given the importance of strong, effective institutions to the development process, it is not surprising that mechanisms for institutional support have stayed among the Centre's activities and on its policy discussion agenda over the years. The concept has been raised in many different contexts, as the following examples indicate.

- Two of the policy issues which **David Hopper raised in 1973** questioned: (a) the balance of Centre support between institution building, training and project support; (b) the amount of emphasis on core support versus project support.

- **PPR II** pointed out the need to examine the issues related to institution-building and the mechanisms and types of institutions it should involve. It quotes from the **President's statement to the Board in October 1980**:

  > "The broad spectrum of strength found in developing country institutions raised the question whether research support should be offered solely through the mechanism of project activity. Is there a demonstrable need for some variation in the Centre's approach to the strengthening of institutional capacity?"

- In **1981, the Board** adopted a policy of institutional support to social science institutions which were operating in hostile environments in the Southern Cone. This policy was rescinded in March 1986 with the intention that the Centre would become even more flexible than it had been in the past in its use of institutional support.

- In **1983,** in discussing options for support, **Management Committee** recognized the potential benefits of institutional support to help meet critical operating costs, to build up institutions in

weaker countries, and to suppport development with less labour-intensive methods.

- The **Board resolution in PPR VI** on research-supporting activities had strong institution-building implications.

- In 1984 and 1985, **evaluations of IDRC-funded projects** in Tanzania, Ethiopia and Thailand found that the major constraints to research utilization were weaknesses in the capacity of local institutions. Recommendations addressing these constraints focussed heavily on building institutional capacity (IDRC, 1984; IDRC, 1985).

- During the ten-week **P&M seminar in 1986,** integrated support for research institutions (ISRI) was highlighted as a way of coordinating divisional support to cover both research and research-supporting activities. It was seen as a potentially effective means to achieve greater coherence in Centre programs, to promote greater consistency and coordination in Centre activities, and to channel support to activities which are oriented towards the application of research results.

- Discussion of ISRI by **Management Committee in October 1986** acknowledged that funding single research projects often leaves crucial gaps in an institution's research capacity and that institutions would benefit from support for infrastructural as well as research-supporting needs. Inter-divisional coordination with regard to particular institutions, and the development of inter-disciplinary efforts geared towards utilization of research results were considered of primary importance.

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From its origins as an implicit part of project funding, the concept and practice of institution-building in IDRC has evolved as these policy discussion highlights illustrate. Increased capacity for strategy formulation at the corporate level coupled with a build-up of experience in building research capacity through a variety of means, has brought the Centre to the point where it may want to consolidate its approach through the application of broader, Centre-wide strategies for attending to institutional needs.

The purposes of this paper are to survey existing knowledge on institutional support, focus discussion on the key issues relating to increasing the Centre's effectiveness in this area, and to suggest courses of action.

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2.   THE INSTITUTION-BUILDING LITERATURE

2.1   The Concept

In the literature, the sociological concept of institutionalization is central to the idea of institution-building.   It involves establishing behavioural norms, regulative principles and organizational structures which serve and are accepted by the society.   Relative to development, the literature talks largely in terms of building organizations to carry out social and economic tranformations, of creating the kinds of social structures and processes which can promote and manage development, and of infusing these organizations with value.   An institution has a mandate and some measure of autonomy in determining its programs;   it is accepted and valued by others as important and significant, and has some impact on its environment.   It becomes more stable and secure with increasing capability to perform its functions and fulfill its mandate.   Its outputs are valued and assimilated within the social/ economic environment in which it operates.

Researchers in their search for a theory of management for institution-building, have compared different approaches, trying to draw lessons from them.   Attempts have also been made to establish guidelines and checklists for practitioners as well as efforts to develop a conceptual framework for analyzing institutional variables which encompass all these features.

A seminal writer on institution-building is Milton Esman who, by 1967, had developed a list of factors which determine the extent to which an organization becomes institutionalized (Eaton, 1972).   These elements, which can be identified, assessed and manipulated are intended to represent the full range of ingredients which are

necessary for an institution to be viable.   (See Annex I for a summary of Esman's institutional elements.)

Esman's approach laid the basis for much of the subsequent literature on institution-building. Some scholars have refined and elaborated it as a theoretical management model, others have made efforts to operationalize it for the construction of institutional profiles to assess growth, performance and viability. These, as well as efforts to quantify application of the model still require, according to a recent review of the literature (Blase 1986), further elaboration to be of value to practitioners.

Research institutions are not represented in the case studies; much of the literature is, therefore, not directly applicable to IDRC's clientele. However, many of the general lessons, applicable to all types of institutions, could provide or stimulate useful ideas relative to the kinds of institutions with which the Centre works.

2.2   Institution-Building Strategies

The strategies or policies employed by donor agencies for institution-building are varied and changing. So far, no universally recognized or proven approach has been developed as agencies continue to design or adopt strategies best suited to their objectives, procedures and evolving Third World environments.

There are five or six basic approaches that have been used in institution-building efforts: the blueprint model, the logframe, "second generation", "third generation", direct institutional support and the "learning process" approach. They fall along a continuum, with the blueprint model at one extreme and the learning process model at the other.

The blueprint model was developed in the 1960's by academics and social scientists with extensive field experience; it gained widespread use in the days of large-scale capital infrastructure and construction projects. The model represents a top-down approach and attempts to narrow down and define the essential systems any institution will require: leadership, doctrine, program, resources, internal structure, and various linkages with other organizations and social groups. This is also referred to as the "First generation" approach or "turnkey" model, and it is characterized by a large degree of external involvement and decision-making. The agency provides all or most of the early funding; the agency measures impact on the beneficiary, and the agency manages the project up to the point where some national staff are considered suitably trained and the institution is handed over to the government. The institutional project (its identification, design, selection, supervision and evaluation) is treated as the basic unit. It has definite goals, a definite time-frame, and a careful specification of the resource requirements, the details of which are determined in advance of field contact.   It has been said that the blueprint approach has an "appealing sense of order, specialization, and recognition of the superordinate role of the intellectual which makes it easily defensible in budget presentations" (Sweet & Weisel, 1979); that its emphasis on well-planned and clearly defined projects with discrete outcomes makes it more suitable where the task is defined, the outcomes tangible, the environment stable, and the costs predictable.   It is, therefore, more applicable to large-scale, construction or physical infrastructure projects, than to rural development or knowledge-building institutional projects (Korten, 1980).

The logical framework matrix (or logframe) was developed and adopted by USAID in 1971, and quickly spread to other donor agencies as a

methodology for developing and assessing projects, including those aimed at building institutions. Like the blueprint model, the logframe is project-specific. Although it is not ideally suited to institution-building projects, its universal applicability and relative simplicity have made it very popular with large donor agencies in all kinds of programs. The logframe's matrix makes it possible to summarize succinctly the projects' purpose, goal, input and outputs and to evaluate the intended relationships among the various components.

The **"second generation"** approach, (UNDP's terminology) combines elements of the blueprint model with the easy-to-use logframe in a more refined institution-building model. At each of the levels of objectives, outputs, activities, and inputs, the second generation model makes a clear distinction between project support and longer term assistance aimed at the institution. This model moves the development initiative decisively from the donor to the recipient and a conscious effort is made to allow both the government and the aid agency to work as a team at key decision points.

The **learning process** approach is based on the assumed superiority of a "learning" approach over a "blueprint" approach. Its proponents believe that programs which are part of a holistically perceived learning process are much more viable in developing country environments which often require considerable reactive capability at the field level.

The key here is not preplanning but developing an organization with a capacity for learning. Programs are not designed and implemented - rather they emerge out of a learning process in which host nationals and program personnel share their knowledge and resources to create a program which achieves a "fit" between the needs and capacities of

the beneficiaries and those of the outsiders who are providing the assistance (Korten, 1980).

A **"third generation"** approach is currently being developed by UNDP in response to the shortcomings or failures of the second generation approach. In the earlier model technical systems, such as training courses, research procedures, and agricultural or industrial processes, were well-addressed and only rarely gave problems. However, the managerial dimensions proved to be weak, not so much in the internal systems (personal, financial, and organizational) which are relatively strong, but in the external systems that relate the institution to its environment. Five of these systems are repeatedly found to be lacking: information, planning, marketing, feedback, and external linkages.

Under the third generation approach, UNDP is attempting to deepen its sector analysis capabilities by undertaking complete sectoral reviews looking at required institutional strengths at the different levels (end user, producer, national infrastructure, etc.) This will, they hope, facilitate the identification of precisely what minimum functions are required to support each level. By following this approach, the development of a sector becomes a more dynamic process involving careful planning in designing project networks or multi-level support, and on analysing the economic, program and managerial dimensions (UNDP, May 1985).

Direct support or institutional selection programs take elements from a number of different models. These programs will invariably have a checklist of essential attributes that can be matched against each institution to determine their suitability for funding. Selection criteria or quality standards applied to assess each institution may include leadership, resources, internal structure and management

processes, and external linkages. In addition, a goal-oriented and time-specific format like the logframe will be used to monitor program outputs and the time-frame required for support. These programs will also have some of the qualities of second generation thinking in that they make a distinction between project support and institutional support. Like the learning process approach, each program will be tailored to the specific institution in question, but the degree of autonomy granted to the government or recipient institution will vary with the donor organization and the amount of independence the individual program is given. Support may be given for a wide range of activities including technical and managerial training, information and communications systems, etc.

3.   THE DONOR AGENCIES: SELECTED EXPERIENCES

3.1   Approaches

Although the **World Bank** sees institutional development as a central component in development, and although 80% of its projects involve some form of institution-building, it has not developed a distinct institution-building model or strategy of its own. A staff paper on the subject states that "the lack of clearly superior approaches in this field calls for considerable experimentation". Hence their efforts in institution building have spanned a wide variety of areas: management methods and systems, organization design, planning, staffing and training, financial management etc. according to the demands of a particular situation. The lack of a conceptual framework and of in-depth analysis of the Bank's experience makes it difficult to document or learn from its approach.

USAID's approach to institution-building has been somewhat more innovative. For a time they toyed with an approach based on the Esman model. However, by the 1970s the Esman model was almost completely neglected by project designers and AID program staff, replaced by the logical framework matrix (USAID, 1982). Although it found the model relatively abstract and difficult to quantify, USAID's choice of strategy appears to have been primarily determined by the fact that 70% of USAID projects are capital-assistance or food-aid, (i.e., non-institution building) for which the logframe was quite well suited.

Like the World Bank, 80% of **UNDP** projects have capacity-building elements. But where the Bank has not developed a specific framework for institution-building, UNDP has tried several. They used a blueprint or "first-generation" approach in the early 1970's, which

was not very succesful. Permanent, self-sustaining institutions did
not emerge under this approach which relied heavily on external
support and expertise. A "second-generation" approach was developed
after 1976, which made a sharp distinction between the project and
the institution. But like USAID's attempts with the Esman model,
UNDP has had trouble implementing this model. Most project designers
in the UN system are probably more familiar with USAID's logframe
because of its widespread use.

Unlike the World Bank, USAID and UNDP, the WHO, through two of its
Special Programs (Human Reproduction Program; Tropical Diseases
Program), has developed a deliberate strategy for
institution-building. It makes funds available to LDC institutions
for both "core support" and "institutional strengthening support" --
provided the applicants meet certain conditions. There is a
long-term institutional development grant to strengthen research and
training activities in a recipient institution, with an upper limit
of ten years. Through another program, grants for capital equipment,
laboratory supplies, research training and projects, and small
start-up grants are also offered. Over the years, WHO has developed
selection criteria and general policies to provide guidance in
determining which institutions receive funds, and also to allocate
the amounts each will receive. (See below: pages 14 and 15 for WHO's
general guidelines.)

SAREC, whose main strategy for research support has been the
strengthening or creation of national research councils and the
channelling of funds through them, is now questioning the
effectiveness of that approach. A Committee appointed by the
government to evaluate SAREC's funding strategy has advised against
creating or using these councils because of the high costs involved
in maintaining an organization "that in many cases constitutes an
extra bureaucratic link between the source of finance and the
research itself" (SAREC, 1986).

Instead they recommended pursuing a program of direct support to certain research institutes. The Committee does encourage support of "centres of excellence", scientific or technological institutes which would strive for international recognition. Aware of the problems of selecting the correct institution, SAREC has yet to develop a specific strategy.

3.2   Achievements

According to the World Bank, institutional and managerial problems are perhaps the most pervasive and serious in the development process, and hence agencies' efforts in this regard have not been as effective as they have been in meeting the objectives of project support.   This is not surprising, since the development of institutions is one of the most complex of activities, involving the vagaries of human behaviour and the influence of cultural and political factors.   Also, institutional development involves sustained, long term efforts that transcend the traditional project approach; and its basically qualitative nature makes it hard for most agencies to program, budget and control (World Bank, 1980). The body of knowledge available to tackle these issues is not well developed and has lacked empirical focus. It is not surprising that most agencies are not pleased with the achievements of their institution-building activities and are searching for new approaches.

The overall success rate in institution building projects has not been very good. A ten-year audit review of World Bank projects and their institution building components shows that most efforts achieved only "partial success" (World Bank, 1982). USAID's review of its support for institutions concluded that "the results were generally about half positive and half negative" (USAID, 1982). IADB

reported that "the objectives of institutional development operations are seldom fully achieved" (IADB, 1982). According to the recently published book, <u>Does Aid Work?</u>, sixty-seven per cent of CIDA-aided host country institutions were unprepared for self-reliance at the time of CIDA withdrawal; and the World Bank's African efforts in institutional development have not been very effective (Cassen, 1986).

The UNDP's Bureau for Policy Planning & Evaluation, has been questioning the effectiveness of current institution-building efforts: "Thus in terms of quality of performance, the U.N. system appears to be permanently constrained on a rather low plane, and it is difficult to identify any real improvements of a quantum nature that have been effected in the last twenty years or so." In institutional terms the results were "isolated and static institutions, ivory towers that have little or no ability to respond to external factors, and remain very vulnerable to any unanticipated changes in their environment" (UNDP, 1985).

At SAREC, in reviewing the impact of its program on research institutions, the evaluation committee reported that the National Research Councils have been "passive links" in their funding efforts. "They have sat waiting for applications to consider....in general, we get the impression that the councils have been strange elements in the environments which they were supposed to serve" (SAREC, 1986).

WHO's Special Programs, on the other hand, have found that their institution-building has led to the development of greater self-reliance, as indicated by: a) increased national commitment; b) attraction of outside financing, and; c) ability of institutions to implement their own programs. A maximum time limit

of 10 years is designed to encourage greater independence and
self-reliance; institutions receiving long-term development support
will be required to submit five year plans of activity and training
(WHO, 1986).

3.3   Evaluations

The evaluation of institution-building programs has not become
institutionalized among donor agencies. Evaluation data is scarce
and measurements of "success" are rudimentary. However, some
evaluation information can be gleaned from more general reports.

In its early experience with various techniques and approaches the
World Bank found some major shortcomings with respect to meeting
developing country needs. Approaches which were basically top-down,
concentrated on institutions at the national and sectoral levels but
gave little attention to local governments. Quantitative techniques
were applied in many situations where behavioral methods would have
been more appropriate (World Bank, 1980).

Evaluators have expressed major reservations with the logframe
approach.   In 1980, USAID's Design and Evaluation Manual cited
shortcomings in their institution-building efforts.   These were
partly due to the rigid format of the logframe which tends to
"require quantitative measures, when much of the concern should be
with qualitative, ie: improvements in human knowledge and skill,
institutional capacity, etc..."(UNDP, May 1984).   A subsequent
document questioned why the Esman model, considered more appropriate
for capacity-building than the logframe, disappeared and was never
adopted by USAID. (USAID, March 1982). Consultants within UNDP have
also been expressing alarm at the persisting application of the
logframe to institution-building efforts.

In 1980, World Bank project advisory staff reported that "tight projects" - those involving institutions in modern technology and financial matters (e.g. banks, industrial producers, telecommunications and power generation) are generally more successful than those whose organizations are characterized as "social" or "people-oriented" (e.g. educational, agricultural and health). The latter are described as "loose" activities, and have more diffuse and hard-to-measure effects.

3.4   Lessons for the Future

The above review of donor documentation on institution-building reflects some of the problems encountered with the early approaches. It also reveals the serious paucity of evaluative information on activities which have absorbed massive amounts of funding. Some of these agencies have however, drawn conclusions on which to base future activities.   David Korten of The Ford Foundation, Manila Office, feels that certain social or "people-oriented" projects create special design problems that are not being addressed adequately.   Instead he advocates that programming frameworks and methods be based on a **learning process approach** which integrates action-taking, knowledge creation, and institution building into a coherent learning process (Korten 1981).

The two WHO Special Programs, probably the best designed of all the institution-strengthening programs surveyed, have the following general guidelines:

°   Realizing that not every institution will fit easily with donor general strategies and policies, the individual character of each institution is taken into account when decisions on support are made.

- Within each institution, the Special Program strives for the achievement of a "critical mass" of researchers competent in the basic biological and social sciences, performing quality research of national relevance and scientific importance.

- In supporting an institution's long-term development, the program will give priority to countries where national authorities have agreed to gradually assume the costs of recurrent local salaries and expenditures.

- Research training of individuals will be funded only in the context of explicit long-term plans for staff development, including creation of suitable research career structures.

- Institutions being funded should either be the research arm of national family-planning programs or have established active links with such programs.

In addition to these general guidelines, the Special Program applies a set of selection criteria to the institutions being considered. Each institution and its application are scored on four aspects - relevance, committment, needs, and performance - with a scale of one to ten for each aspect. To facilitate the work in making judgements on future proposals, the Human Reproduction Program has adopted standardized application and reporting formats.

USAID's 1982 study, Effective Institution Building, was a serious effort to provide new guidance for institution-building. It presents an extensive checklist specifically designed for institution building projects. Although based on the logical framework design matrix, it does encourage tailoring the project to host-country capabilities, involving the government in project design and follow-up, keeping

indigenization as the aim of institution-building projects, encouraging necessary linkages with other institutions; and providing human resource development components.

The Ford Foundation, in its support to educational institutions in the southern cone of Latin America during the 1970s, used a very comprehensive funding approach through which it allowed the research institutions themselves to set their own research agendas. A wide range of institutional needs and activities were supported, many of which did not fit with the preferences of other donors. Ford found this approach to be successful. By 1980 they were able to taper off the amount of funding going to these institutions: as other sources of funding came on stream; as education research began to flourish in the region; and as they began to see the possibility of shifting from capacity building to capacity utilization in these institutions.

Ford Foundation learned several lessons in its assistance to southern cone institutions. They found that success requires a complex mix of activities. Good leadership and a stable institutional environment were also important. Ford found that the careful selection of high quality people for staffing and for training was critical. "An outstanding researcher trained in a program of average quality will usually be more productive than a mediocre researcher trained at one the best programs in the world" (Puryear, 1982).

The Ford Foundation considers the cornerstone of its success to be its ability to fill important gaps in the institution's research programs and its ability to support activities based on insititutional interest and national needs, in contrast to research agendas constrained by the specific requirements of other donors.

The SAREC evaluation urged SAREC to concentrate its limited resources in several countries and restrict activities to a few important areas: research training, basic academic education and research infrastructure (equipment, libraries, and laboratories).

The UNDP's "third generation" approach acknowledges the value in seeing the organization within its sector, and as part of a wider system. By disaggregating the different institutional elements, it determines, in technical, managerial and economic terms, what needs to be addressed to achieve success. Emphasis would thus move from technology transfer to technology adaptation, and include staff training and the encouragement of innovation and creativity. The intended result is a thinking institution, strongly focussed on the market in terms of end-users' actual needs, and flexible and innovative in executing its programs.

The World Bank's 1981 sector policy paper on agricultural research listed the following basic set of principles, as widely applicable in the design of any effective research program:

(a) research goals must be clearly stated; (b) there must be continuity in goals, management policies, and supervision of the research program; (c) the research agency must have an acceptable degree of autonomy; (d) the national research effort must be provided with technical staff and financial support consistent with the severity of the problems that limit agricultural production; (e) there must be a continuous flow of information to the research staff about production problems confronted by farmers; (f) simultaneously, mechanisms must be provided to permit research results to flow to farmers, with emphasis on on-farm testing; and (g) the government should encourage arrangements that facilitate the coordination and

cooperation of a country's total research establishment (public or private) in pursuit of common objectives (World Bank, 1981).

A number of general points can be extracted from documents dealing with the institution-building activities of various donor agencies. The following section lists some general factors affecting the success and failure of such undertakings.

3.4.1 Prerequesites for Successful Institution-Building

- **Design:** Careful planning of the institutional activities. Ideally the institution should focus on a well-defined problem area.
- **Implementation:** The need to involve intended beneficiaries at as many stages as possible of decision-making and implementation.
- **Manpower & Training:** Rather than using expatriate advisors, successful institutional development depends on nationals trained in appropriate technical and managerial skills (long-term degree programs, seminars, action Training Workshops, etc.).
- **Organization:** The institution must be flexible and capable of adapting to changing local and national needs.
- **Appropriate technology:** The techniques generated must be appropriately matched with the needs of the people who are expected to apply the knowledge and technology.
- **Management:** Key organizational systems must be strong (eg. decision-making, resource allocation, information processing, budgeting, personnel and logistics).
- **Informal aspects:** To ensure organizational effectiveness, any program has to consider how employee behaviour is influenced by the structure of authority, incentives, and information processing, (includes being sensitive to cultural fabric, ideological, ethical & inter-personal relationships).

- **Autonomy:**   There   must   be   enough   institutional   autonomy   for policies   and   procedures   to   correspond   with   the   specific requirements of the research process.

- **Decentralization   vs.   centralization:**   Independent   researchers require   a   high   degree   of   operational   and   decision-making decentralization,   yet   there   are   obvious   economies   of   scale   in centralizing   services   and   support   activities   (library,   laboratory, etc.).

- **Linkages:**   The   research   institution   depends   on   and   is   depended   on by   other   organizations   both   within   and   outside   the   research system.   Essential   interactions must be   identified and fostered.

- **Leadership:**   The   appointment   of   a   non-political,   dedicated aggressive   administrator   greatly   helps   the   posture   and effectiveness of the institution.

- **Retention   of   Staff:**   Competitive   conditions   of   employment   for institution,   ensuring   a   high   degree   of   permanence,   rewards   for good   workers,   and   opportunities   for   continued   growth   are essential.

- **Indigenization:**   The   basic   aim   is   to   leave   behind   institutions that are managed, operated and funded locally.

- **A   stable   political   environment** is   a   key   to   sustained institution-building   efforts.

One of the key questions for IDRC is to what extent can it address these issues through the project mode?   In other words, could other support mechanisms enable IDRC to take more of these factors into account?   In addressing this central question it is useful to look first at the strengths and weaknesses of the project mechanism itself.

4. PROJECT STRENGTHS AND WEAKNESSES

The project is a time bound activity with a defined time frame and specific objectives. It allows one to break down complex or long term research problems into manageable components. It is well-suited to giving young scientists on-the-job training within a defined scope of activity. A project is also a good means of producing a specific product based on a fixed budget. This makes it relatively easy to evaluate and well-suited to applied research and to research with some possibility of an economic payoff. The project mode allows the funding agency to test institutional and individual capability through a limited commitment and gives the institution some flexibility in drawing on available talent as required. As applied by IDRC, it can be a highly flexible modality and can incoporate a wide variety of activities and forms of support.

While it has its strengths, project support also has a number of distinct disadvantages for the recipient institution. Many have commented on these, both among IDRC staff and in the literature (Ruttan, 1982; Morss, 1984). Examples are cited below, **not to suggest that the project mechanism should be eliminated, but to explore ways in which it could be improved.**

Institutions with cashflow problems or urgent needs to meet fixed running costs are very vulnerable to the suggestions of financing agencies. It is easy for a donor's interest, backed up by the availability of funds, to attract institutions into research areas which do not reflect their long range programs, their mandates or the national development needs.

Research centres surviving solely on project support may find themselves leaping at funding opportunities with the best chance of

success i.e. areas where they have the greatest expertise. Over time such institutions' research programs may come to reflect the talents or interests of its staff members rather than jointly defined needs or research problems in the country or region.

The search for project funding wastes scarce resources. It absorbs the time of researchers in non-research work and, through the specialization of staff who are more proficient at obtaining research funding, it distorts the performance of the staff members (the best fund raisers get the credit). The development of each project involves sometimes extensive negotiations and, once funds are secured, there are the different reporting requirements of the various donors which must be fulfilled. The management of discrete projects from various donors is hard to coordinate both at the donor and at the recipient level.

Project funding may not foster innovation and creative problem solving. Once a contract is signed and arrangements are fixed, the researcher has a commitment to fulfilling its terms rather than solving problems as they evolve or are discovered.

Through being tied to specific projects, staff may begin to see themselves as contract rather than core staff. This can negatively affect staff participation in longer range institutional activities, and reduce collegiality between project and other staff.

Project support does not deal directly with the long term needs of the institution. Therefore, the stability of both financial resources and staff is undermined. Even the institutions which have been successful and have stayed alive by finding project support are constantly subject to the vagarities of funding availability.

Certain types of research are not readily amenable to externally funded projects, for example: exploratory or basic research, literature reviews and evaluations of research programs. There is also the question of whether the project mode can efficiently tackle long term multi-dimensional development problems. Is it an efficient way of providing the sustained and integrated effort with the continuity required over several stages?

These critical comments concerning project support relate to the weakness of its **exclusive** use. Most authors make a plea for a mixed package of support to strengthen research institutions. Project and non-project support, when used in conjunction, can be mutually reinforcing and complementary in building institutional capacity.

Although institution-building is time and labour intensive and no formulae for success have been developed, a strong conviction pervades the literature that efforts to strengthen institutions are well worth the effort. For example, Cassen reported links between institution-building and the rates of return on projects: "some 82% of the projects that achieved at least partial success in the institutional objectives, yielded returns of 10% or more whereas 73% of the projects with poor institutional results yielded poor and negative returns" (Cassen, 1986: page 202).

The IDRC staff members who were interviewed for this paper identified examples of how project support alone can fall short of covering crucial institutional needs. Some of these are:

-   Funding which does not look at the institution as a whole, its internal as well as external environment, runs the risk of ignoring critical institutional constraints.

- Fixed running costs such as overhead and non-research staff salaries are difficult to cover on project support even if they are badly needed for a short time period.
- In the past, IDRC has been inconsistent in its treatment of institutions both between projects and between divisions.
- A project is appropriate to tackle research problems at the micro level or as part of a specific program but is too small a unit to address a multi-faceted technological need or development problem. Technology development has different phases which cannot always be conveniently divided up into discretely funded, time bound projects.
- For institutions with broader needs and a mandate which is based on a longer time and directed at a larger scale problem, program or project funding must be complemented with other forms of support.

Program staff also gave many examples of how the Centre currently uses the project mode with flexibility and creativity. Some felt strongly that there is usually a way to get an institution whatever it needs through: the involvement of other donors, the formation of a donor consortium, innovative funding requests to IDRC's Board of Governors, and camouflage within a regular project.

4.1   Staff Suggestions

When asked to comment on policy which would facilitate more effective institution strengthening, staff mentioned a number of basic tenets which should guide the Centre. Clearly, these comments could apply to all kinds of support; project, program or institutional:

1) The key to an effective centre policy would be to permit maximum flexibility to adapt support to specific institutional needs in different environments.

2) Existing training policy is adequate in that it is tied to Centre-funded activities and strives to strengthen the Centre's client institutions over the long term.

3) Policy should encourage the linkage with other donor agencies to provide core support or infrastructure building. In many cases where infrastructural needs go beyond IDRC's financial resources, efforts should be made to draw in other donors with the capacity to provide for those needs.

4) IDRC should build on its strengths: its intellectual resources, its research protocols, its monitoring provisions and its general reliance on close personal contact and collegiality.

5) Budgets should be allowed to include a line item called institutional support to provide important indirect project costs which may be needed.

6) Post funding support should be available to provide for a parting grant to an institution to promote utilization of the research, or for capacity-building or networking.

7) The Centre should use specialized expertise and mechanisms to identify institutional needs and design ways of addressing them.

8) Institution-building policy could also cover non-research institutions: those institutions which provide service to research institutions.

9) African institutions should be a top priority.

10) NGOs should be looked at as possible recipients of institution funding.

11) The Centre should be prepared to make long term funding commitments to institutions selected for this type of support.

12) Centre policy should recognize that institution-building is more than the provision of buildings, equipment or management systems. It is also the creation of human capability within an environment which allows that capability to express its potential and which assists that expression to benefit the society around it.

Program staff also identified institutional needs which they find unnecessarily difficult to provide under current policy. These include:

- essential buildings or equipment which are not project specific but which are critical to the overall functioning of the institution;
- research management training in areas such as accountancy and procurement;
- help for fledgling institutions which have not yet been able to prove themselves through establishing a credible research record; funds for the granting of small individual project grants to its staff members;
- small research related activities such as literature reviews and evaluations which may not be directly tied to one particular research project;

- salary support to provide release time from teaching for staff to devote exclusively to research;
- seed money for the pilot production or commercialisation of a technology developed through research;
- various research-supporting items such as dissemination of reports, use of consultants, provision of essential equipment (telex machines and vehicles) which have an institution-wide use and are required during a critical time when a project funding is not being considered;
- and needs in other research support areas such as computers, libraries, equipment, procurement, maintenance and storage facilities.

In discussing critical institutional needs, the one area of the world most often mentioned by program staff was **Africa.** This is an area of the world which, after independence, did not benefit as did Asia from the early large scale institution-building efforts of the major donors. Today, throughout the continent, research institutions, many of which were formerly centres of excellence, are deteriorating rapidly, with their governments in no position to offer adequate assistance. There is, it is felt, an urgent need for institutional support to stop regression in institutional capacity all over Sub-Saharan Africa.

5.   CENTRE EXPERIENCE

To get a sense of the degree to which the Centre has concentrated on building up individual instititions, tabulations were done of the developing country institutions with single and multiple division funding over the past five years. The following table shows that, of the 843 Third World institutions for which grants have been approved since 1983, 70 percent received only 1 IDRC-funded project, and 78 percent were funded by only one division over this time period. One hundred and fifty-two institutions had more than one project and were supported by more than one division.

NUMBER OF THIRD WORLD INSTITUTIONS*
FUNDED BY IDRC: 1983/84 - SEPTEMBER 1987

| | FUNDED BY | | | | |
	One Division	Two Divisions	Three or More Divisions	Total	(%)
With one IDRC-funded project	553	32	2	587	(70)
With two or more IDRC-funded projects	104	103	49	256	(30)
TOTAL (%)	657(78)	135(16)	51(6)	843	(100)

DATABASE: PINS

* These are indicative figures based on the funding classifications used for accounting purposes. They **do not** reflect all the actual, nor all the feasible instances of interdivisional collaboration to strengthen institutions.

In the high proportion of institutions with one Centre- supported project, there may be many in which critical institutional constraints are not covered. Among the relatively large number (152) of institutions with multiple projects from multiple divisions there is considerable potential for looking at coherence among Centre-funded activities and determining whether there are other institutional needs related to these activities which need to be addressed.

Some of IDRC's activities can be classified as discrete types of institutional support. The **creation** of institutions in concert with other donors has been one area of significant activity, almost entirely at the international level. Institutions such as ICRAF, Technonet, and ICARDA fall into this category. **Program support** for networks and institutions has included the Southern Cone institutions of Latin America, and support to AIT, ICIPE, and to consortia such as the Philippine Social Science Council (PSSC) and the Southeast Asian Research Review and Advisory Group (SEARRAG). Of the sample of 104 projects analyzed for PPR IX, a third fall into this category. A third category of institutional support is **project support** within which funding for institutional needs directly related to the project is included. This can include equipment, technical or managerial training, publications etc. The majority of IDRC projects fall into this category. A fourth category encompasses projects through which the Centre provides funding primarily for **research-complementary** activities. Twenty-one percent of PPR IX's sample of projects provided this type of support. These were mostly FAD, IS, Communications, and CGT working in areas such as financial and administrative management, dissemination of research results and the provision of information services. A recent innovation in support mechanisms was recognized in PPR VIII as Integrated Support for Research Institutions (ISRI). It involves the coordination of

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divisional support to an institution to cover both research and complementary research-supporting activities with the purpose of institution-strengthening. In this new area, a number of initiatives have recently been approved.

5.1   Review of Centre Documents

Given the implicit rather than explicit nature of the Centre's institution-building, very little direct evaluative information exists on the results. However, lessons can be drawn from a number of sources.

The five year period of aid to institutions in the Southern Cone of Latin America was evaluated by a number of authors (Fox, 1980; Tillett, 1980 and Avalos, 1985). The Fox and Tillett studies were need assessments prior to the establishment of Centre policy for this form of support; and the Avalos' study is an ex-post facto evaluation. On the whole, Avalos found significant positive results in terms of establishing coherent research programs; building up a core of experienced researchers; concluding the majority of the planned projects; and, in a few cases, having some influence over policy in the region. The major weakness appeared to be a lack of financial independence on the part of the institutions at the end of the period of support. Based on her findings, Avalos recommends that the concept of institutional support should be reformulated to encompass more specific institutional needs such as program support, salaries, infrastructure, networking, publications, training etc. Such support, she states, is adequate only when it is part of a long term commitment and is directly linked to well-defined research programs. Avalos concluded that institutional support may be a

better mechanism to support the long term production of quality research than it is for crisis alleviation. (Avalos, 1985).

A 1980 study of IDRC project networks found that networks can have a very positive effect on institutions by strengthening their research confidence and by building useful linkages. The report acknowledges the long time commitment required to build up institutions and recommends that IDRC look at becoming more active in its institution-building role (Nestel, Hanchanlash & Tono, 1980).

Another 1980 study, "Appropriate Policies and Practices in Least Developed Countries (the African experience)", also devoted special attention to the issue of institution-building. It concluded that major institution-building initiatives were probably beyond the Centre's capacity. However, with selected institutions, efforts of appropriate scale should be initiated, especially in Africa where institutional capacity was considered particularly weak. (Simpson & Price, 1980).

In 1982 Don Mills, based on his visits to institutions supported by IDRC in four regions, concluded that in many cases there is a very real need to build institutional capacity. He recommended that, at the conclusion of IDRC project support, consideration should be given, in certain cases, to some kind of follow-up support for the institution. He saw a move towards funding on program or institutional basis as an inevitable adjunct to the "more rigid project approach". Mills recommended that the Centre extend its efforts to building research management capacity and to look at longer term commitments to some institutions. He also signalled the need to study the dynamics of institutional growth and to determine what factors affect success (Mills, 1982).

An evaluation of all IDRC funded projects at the Sokoine University in Tanzania in 1985 identified a wide range of institutional impediments to more effective research. Lack of research support services, weaknesses in both technical andadministrative skills, lack of some basic equipment supplies and inadequate management and infrastructure were areas in which attention was required. Proper man-power development, linkages with other organizations, and improvements in the library and in information management systems were seen as key to the efficient functioning of the institution. These were serious needs which were identified following a ten year period of project support from four divisions (twelve projects). The implication is that more of an institutional focus would have been a valuable supplement to these projects in identifying and addressing crucial needs.

A study of economic research institutions in Sub-Saharan Africa (Steedman, 1986) reiterates the importance of continuity to the research institutions in the region. Donors were seen as having the broad spectrum of instruments needed to sustain and improve institutions such as: training staff infrastructure building, research projects and networking. Yet a sustained and coordinated effort, on the part of donors, would be necessary to make those measures effective on a long term basis.

Current interest in the institutional impact of Centre activities has given rise to several ongoing evaluation studies with institutional foci. AFNS and OPE are collaborating on an evaluation of the impact of Centre funding on the Chinese Academy of Forestry; and an institutional assessment of CIRES will be carried out in January 1987. IDRC support to the Bharatiya Agro-Industries Foundation (BAIF) in India will contain an institutional evaluation component; and the Social Sciences Division, Education Program is carrying out

an evaluation of its program grants relative to various aspects of organizational structure, human resources, research capacity, other research supporting activities, as well as external institutional linkages. The results of these and other studies will provide valuable feedback for the Centre.

6.   CONCLUSIONS AND POLICY RECOMMENDATIONS

All the information available for this review suggests that:
a) project support may leave or create gaps in the capacity of
research institutions; and b) filling these gaps by more systematic
attention to institutional needs can be worth the effort. Clearly,
no proven method exists for this difficult challenge and each
situation will have its own peculiarities and problems. The
literature does contain, however, some valuable guidelines and
checklists to help identify and select areas of need and design
activities to address them. Promising work in the management area is
the matrix developed for the diagnostic studies of research
institutes by Project AGIR (Centre africain d'études supérieures en
gestion, 1985).

This paper does not try to determine whether or not IDRC should
create new institutions or take weak institutions and build them up
to a certain level of capability. It does addresss whether, as a
supplement to "straight" research project support, it would be
advantageous to focus more on institutions and try to address a
broader range of needs which are important to the production and use
of research. The conclusion is affirmative: **the Centre should
consider funding for activities less tied to projects than it does at
present: activities which address critical constraints in its client
institutions.** In doing so, IDRC would increase the probabilities of
useful outcomes from the projects and other activities it supports.

Much of what the Centre already supports (equipment, training,
management systems) strengthens institutions. However, the Centre
could be more active in systematically diagnosing institutional needs
and potential capabilities, and then drawing on the relevant
resources accordingly. In many cases, a long term comprehensive

package of support could be designed, drawing more heavily on a wider range of Centre resources.

6.1   Definitions

The experience reviewed in this paper illustrates the generic nature of the term institution-building. To help the Centre develop a concept of institution-strengthening/building which can be applied effectively and which is consistent with the way the Centre operates, the following definitions are put forward.

An **institution** is a functional, legally constituted, organization with the structure, and regulative processes to fulfill a particular mandate. Its activities and outputs are valued by and assimilable within the social and economic environment in which it operates. In keeping with IDRC's mission and objective (IDRC, August 1985) the term "institution" will refer to institutions which conduct research or research-supporting activities.

Institution-building is increasing the capacity of an institution to fulfill its mandate. Institutional strengthening or building (the two are used synonymously in this paper) could include the construction of buildings. However, for IDRC's purposes it is suggested that the concept **not** include the building of physical plant. As used here, it refers to strengthening the performance of existing institutions in research-related functions such as: human resources development, publishing, materiel acquisition or maintenance, and financial management systems.

6.2   Recommendations

Based on the above conclusions and definitions, this paper makes two recommendations. Together they represer a range of possible institution-building activities which the Centre could consider.

Recommendation 1:

That general consciousness with regard to the need for strengthening institutions be raised throughout the Centre.

Many Centre projects could be improved through more attention to the institutional needs of recipients. This attention could be reflected in support for activities which are not strictly part of the project, but which address important institutional constraints. Project summaries would, as a result, reflect a greater knowledge of our recipient institutions and include full details of support from IDRC and other sources. New diagnostic tools may have to be developed to supplement current methods of collecting concrete institutional information. Interdivisional collaboration may or may not be necessary under this recommendation. In some cases, one or more than one division could fund a single project with an institution strengthening component; in others, an institution could be strengthened through separate but coordinated projects from different divisions.

The intention here is to recommend more awareness of institutional needs and create the readiness to address them. There will be cases, however, where this will not be necessary such as with the IARCs and other international, regional, or very high quality national centres.

Recommendation 2:

That project funding be supplemented by making longer term, coordinated support from different divisions available to selected institutions for research and research-supporting activities. This would be called Integrated Support for Research Institutions (ISRI).

ISRI would involve more ambitious, longer term support than is typically allowed in a project. It would be based on a systematic diagnosis of the recipient institution and would bring together input from many different parts of the Centre. Major commitments of this sort could be made only to a limited number of institutions. Given the need to monitor closely, and adjust if necessary, this innovative mechanism, it is anticipated that ISRI would be limited to a maximimum of 4 or 5 institutions at any one time.

It should be recognized that ISRI involves some elements of risk for IDRC which are less pronounced with shorter term, technical,project funding. There is danger of being seen as too closely linked with particular institutions or individuals or with their political, social or economic positions. A development approach may fail; or, due to possible unforseen political or financial factors, an institution could decline in spite of IDRC support. There is also the possibility of negative reactions by other institutions or researchers who fail to gain access to such support. While the Centre already faces these dangers to a limited degree, the longer term, closer organizational links which may develop through ISRI could increase the risk to some extent. Therefore, the Centre may have to make it known that ISRI is very much a limited, experimental approach which, if proven successful over time, could be expanded.

6.3 Implementation of ISRI

6.3.1 Selection of Institutions

As is the case for project funding, demand for ISRI will be great; and as with projects, a large degree of discretion should be applied at the program level in the selection of institutions. Final choice will necessarily be arbitrary to some extent as no single institution will be recognized by all as the most deserving or outstanding.

Candidate institutions should be assessed on the basis of need and opportunity for the institution to make a major contribution, and on the degree to which IDRC could make a significant impact. It is envisaged that the Centre would look for opportunities in three general areas when selecting institutions:

(a) where the Centre has already supported projects and there is an opportunity to consolidate the investment by giving broader research support (i.e., for programs) or by providing essential research-supporting activities;

(b) where an institution is ideally placed to tackle important development issues with a particular geographical focus; and/or,

(c) where an institution could play a leading role in building up research capacity in research institutions in a particular region.

With regard to regional emphasis, information from a number of sources suggests that **African institutions** are particularly threatened and could greatly benefit from institutional strengthening and rehabilitation (Simpson & Price, 1980; Hyden, 1983; Steedman, 1986; Cassen, 1986). At the outset, therefore, ISRI should focus on African institutions, perhaps universities as these are among the most critical. A start here would allow IDRC to acquire experience as a basis for expanding, adapting or limiting future activity of this type. To derive maximum experimental value from this support it will be necessary to carefully monitor and revise our strategy on the basis of initial experience.

6.3.2 Conditions of Support

Recipients of ISRI should be required to develop a five-year strategic plan within which the support from IDRC is associated with specific objectives. Guidelines for these strategic plans will need to be developed and should include: the resources to be utilized, the organizational processes to be implemented, the kinds of outputs which will be achieved, and the mechanisms to obtain and integrate donor and national support. As with project funding, institutions will also have to satisfy specific reporting requirements at the technical, financial and administrative levels; and they should accept that evaluation will be an important, periodic part of the funding package.

6.3.3 Duration

Policy governing the duration of support should be clearly laid down. A minimum period of 5 years would be reasonable, with an overall maximum of 10 years.

6.3.4 Nature of Support

Support should be based on a thorough diagnostic profile of the institution, its needs, its environment, and its potential. In some cases an interdivisional team of program staff would be in a good position to diagnose an institution's requirements, in other cases local expertise could be brought in. The importance of regional office staff involvement in assessing the institution should be emphasized, both for their regional experience and for the need to maintain direct access and a close relationship between IDRC and the recipient institution.

While being highly selective in their application, ISRI should make available a wide range of support activities and maintain the flexibility to respond to the specific needs of particular situations. In addition to support for research projects and programs, consideration should be given to funding for needs such as the following: technical training programs; small grants programs; journals; limited, gap-filling capital development; setting up of administrative and management systems; sabbatical study leave; regional networks and workshops; consultancies; information handling systems; libraries; development programs for non-research staff; program and project evaluations; and core grants for fixed operating expenses. The acceptable components and their relative mix would be determined by the institutional profile.

An essential requirement for whatever types of support are provided should be that there be close linkage with support coming from other sources, nationally and externally. A basic premise of IDRC support should be that it works with, augments, and stimulates the continuance of other support and leads to eventual **self-reliance**. Careful consideration should be given to the potential for long run viability, after Centre support is withdrawn; and efforts should be made to guarantee, over time, increased funding from other sources.

6.3.5 Funding and Monitoring Mechanisms

Funding for ISRI could be drawn from regular program budgets and from the unallocated Centre reserve, depending on the nature of the activities and the availability of funds. Intentions to provide ISRI funding should be indicated in the PPR and in the PWB by the divisions involved. Access to funds from Special Program Activities would be provided in the usual way.

The approval process for ISRI could follow a process similar to that for projects. First, approval is sought for a PNM to establish the acceptability of the institution. This document should outline current budget, staff, past performance, etc., and state the period over which support is anticipated. All current and past Centre support to the proposed institution should be identified and an evaluation given of the results of that support. The PNM should also identify clearly the Centre's objectives as a basis for future monitoring and evaluation. Once the PNM is accepted by the Board, a diagnostic institutional profile could be carried out in collaboration with the institution. This is to ensure that the full range of needs is identified; that priorities are set; and that the viability of the institution and the potential for success of the funding is established. The full funding proposal in project summary form would then come back to the Board for approval. Given the long term, broad nature of ISRI it may be advisable for IDRC to initiate a mechanism whereby the Board is informed of the progress and status of ongoing ISRI activities on a biennial basis.

Considerable effort will be required to communicate and reconcile the multiple interests and requirements of the divisions and the institution. Collaboration of this sort can be complicated and time consuming. It is essential, therefore, that the collaborating divisions set up mechanisms which will allow them to smoothly and efficiently develop and monitor their ISRI activities. In some instances a coordinator could be selected from among the involved program areas to ensure that communication among the participants is smooth, unambiguous, and is not overly demanding on the institution's resources. When coordination with other supporters of the institution, both external and national is required, a more formal mechanism involving donors, the institution, and the relevant national agencies may have to be set up.

The Centre may want to conduct evaluations at least once during a period of support. In a long term funding package, evaluations at years three and seven would be ideal. Collaboration among all participants would be essential in conducting the evaluations.

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ANNEX I: SUMMARY OF ESMAN'S INSTITUTIONAL ELEMENTS

Esman's variables fall into two categories; internal, organizational components and external linkages between the organization and the important parts of its environment.

Esman defined his major institutional variables as follows:

Leadership: The group of persons who direct the institution's internal operations and manage its relations with the external environment.

Doctrine: The expression of the institution's major purposes, objectives, and methods of operations.

Program: The activities performed by the institution in producing and delivering outputs of goods or services.

Resources: The physical, financial, personnel, informational, and other inputs which are required for the functioning of the institution.

Internal Structure: The technical division of labor, and distribution of authority, and the lines of communication within the institution through which decisions are taken and action is guided and controlled.

The external linkages with other organizations and groups in the environment comprise the exchange of resources, services and support and may evolve various degrees of cooperation or competition. These fall into 4 categories:

a. Enabling: Relationships with organizations that control the allocation of authority to operate or of resources.

b. Functional: Relationships with organizations that supply needed inputs or which take outputs.

c. Normative: Relationships with organizations that share an interest in social purposes.

d. Diffuse: Relationships with individuals and groups not associated in formal purposes.