



SUSTAINABLE DEVELOPMENT
SOCIAL ORGANIZATION, INSTITUTIONAL
ARRANGEMENTS AND RURAL DEVELOPMENT
Selected Readings



VOL.

6

Sergio Sepulveda
Richard Edwards

AREA OF CONCENTRATION IV
SUSTAINABLE RURAL DEVELOPMENT



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PREFACE

The concept of economic development has evolved rapidly in the last decade; new political, social and ecological requirements which place people and the environment at the center of a process which should be intrinsically sustainable have been added to the initial idea of growth based only upon per capita income.

On the other hand, the gap of regional disequilibria seems to have increased, given the rise of social and economic heterogeneity within most of the countries of the continent. The lack of equality this implies, the various problems faced by urban and rural populations, in addition to the regional disequilibria created, as well as the damage to the environment, all place the topic of sustainable regional development at the forefront of the discussion.

However, for some orthodox economists, the relationship between rural poverty and damage to renewable natural resources is as significant as that which exists between inflation and unemployment. For many specialists in economic development, it is clear that the three most important factors that link these two variables are: rapid demographic growth; the consolidation of commercial agriculture in the most fertile soils, which accelerates the displacement of small farmers towards fragile ecological zones; and the biases in the distribution of access to ownership and use of land.

Acutely aware of this context, during the past two years IICA has honed its conceptual framework of economic development, in general, and of rural development, in particular. In this renewed institutional perspective, rural development is seen as a process in which the ultimate objectives are to increase competitiveness, perfect the use of renewable natural resources, and achieve social and political equity. These three elements require an explicit awareness of their unavoidable political content. Thus, it appears that the application of an inclusive modernization model, with a high social content,

requires overcoming the deficiencies and shortcomings of the social, economic, and political system.

The above demands the establishing of a broad dialogue, one which would facilitate the articulation of the various social sectors and actors committed to the change in structures, and the improvement of the standard of living of the majority of the population. Such a dialogue should be channeled towards the building of a new state institutional framework, as well as new organizational expressions of the civilian society, which should not only be capable of overcoming the institutional crises which the countries of the region are undergoing, but also be able to give appropriate and verifiable answers to the processes of social participation.

The guiding principle of the methodological approach to the thesis of participatory development is the integration of the social, political, economic and ecological elements, as a **sine qua non** condition for the process and the growth of modern societies.

The analysis which follows presents a first approach for creating or consolidating institutional and social organization systems with a creative vision, which will, on one hand, allow for the participation of all social groups, and, on the other, assure the successful execution of national programs of micro-regional development, based on a long-run perspective of management of renewable natural resources.

With this aim, the discussion follows three lines of reasoning: the first deals with sustainable rural development (RD) as a process of change, and, as such, necessarily dynamic in time and space; the second approaches analysis from the institutional point of view as well as that of social organization, and sees the training of human resources as fundamental; the third deals with the participation of organized society in the process of regional development.

There are no simple formulas to guide the design of institutions in general; this is even more true of those institutions that are to be responsible for spatial development at the micro-regional level. With

this in mind, we present a set of questions and venture forth with some answers, while recognizing that each institutional system is modified by exogenous as well as endogenous variables, which makes it necessary to consider each organization according to the characteristics of its own political, social and economic context.

In order to organize this discussion, this document has been arranged in four parts: the first gives the major conceptual elements of micro-regional development; the next discusses the bases for understanding the social and grass-roots organizations; the third summarizes some of the characteristics of the institutional systems for micro-regional development; and finally, the fourth presents the principal elements in a strategy for sustainable micro-regional development.

Also, the cooperation of those authors, publishing houses, and national and international institutions which have granted to permission to reprint the material making up the bulk of this publication, is very much appreciated.

Sergio Sepúlveda Ph.D.
July 1996

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Chapter

AN INSTITUTIONAL FRAMEWORK FOR SUSTAINABLE MICROREGIONAL DEVELOPMENT

• Basic Institutional Characteristics for Sustainable Microregional Development

S. Sepúlveda

BASIC INSTITUTIONAL CHARACTERISTICS FOR SUSTAINABLE MICROREGIONAL DEVELOPMENT

S. Sepúlveda

I BACKGROUND

Many studies, conducted by several specialized organizations (Jordan et al. 1989) towards the end of the 80's, agree that the major causes of the marginalization of certain regions and the worsening of rural poverty in the majority of Latin American countries, are: first, the type of economic development pattern adopted; and, second, the weakness and inequality of the institutional, economic and productive structures upon which this pattern it was built.

Thus, it is recognized that poverty has been a negative social externality. This is backed by several factors: an uneven process of economic development which exacerbated the existing biases in terms of limited access to assets; the distortions in the participation in the "markets"; the use of capital intensive technology; the insufficient creation of new sources of employment in the formal sector to satisfy the growing supply of labor; and the scarcity of options for generating new skills or improving existing ones, in relation to the demand, among other reasons.

In these circumstances, the underlying hypothesis is: the economic, social and politi-

cal cost of not designing and implementing a strategy of regional development, which is essentially long-run and geared to solving the causes of poverty, is greater than the resources required to solve the problem.

On the other hand, and from an ecological and political-economic perspective, the basis of the social stability of a country obligates the elimination of poverty, low rates of unemployment, and a minimum level of job security. All of which call for wide-ranging processes of political participation and preparation of human resources in order to face the challenges of a modern society. The natural resources base becomes, in this approach, a fundamental element of sustainable regional development.

Rural inequality and the deterioration of renewable natural resources

Among the principal causes of the intensive and destructive management of natural resources are the uneven spatial distribution of economic activity, the unequal control of natural resources and other assets, and the concentration of the population in fragile ecosystems. The latter has caused overwhelming demographic pressure in certain regions, such as the humid and semi-humid tropics.

Frequently, poor families in rural areas own small farms located in fragile ecosystems, with poor soils, situated on steep hillsides, without forest cover and where access to water sources is difficult. This situation forces these families to use production practices which demand intensive management of natural resources, which in turn contributes to the depletion of the soil, inefficient use of water and exploitative use of the limited forest cover (Leonard et al. 1989) (See Table 1)

The experience with the institutional system for rural development

Most evaluations of rural development programs and projects on the continent share the opinion that two of the factors responsible for

Table 1. Relationships between inequity and the management of renewable natural resources.

RAPID POPULATION GROWTH			
CONTRIBUTING FACTORS			
MODERNIZATION OF AGRICULTURE IN AREAS OF GREATER POTENTIAL			
INEQUITABLE DISTRIBUTION OF LAND TENURE			
RURAL POPULATION WITH LIMITED ACCESS TO			
ECONOMICALLY AND ECOLOGICALLY PRODUCTIVE LAND			
EXAMPLES OF ENVIRONMENTAL STRESS	URBAN EMIGRATION	INCIPIENT DEVELOPMENT IN SEMI-ARID REGIONS	INTENSIVE USE OF HILLSIDE AREAS
ENVIRONMENTAL EXTERNALITIES	EXPANSION OF AGRICULTURAL LAND USE		
POSSIBLE EFFECT ON THE RURAL POOR			
Sao Paulo Mexico City Santiago Santa Fe de Bogota	Northeastern Brazil Pacific Zone: Central America/Ecuador/ Peru/Chile Northeastern Argentina	Andean region Central American mountain range (sierra)	The Amazon region Central America (humid forests)
* Human settlements in ecologically fragile areas	* Drought conditions are exacerbated	* Destruction of plant cover in basins	* Massive deforestation
* Lack of drinking water and sewage system * Low sanitation levels caused by fecal and chemical contamination	* Soil desertification and degradation * Destruction of the plant cover * Rapid deterioration of energy sources (firewood) * Losses in soil productivity	* Soil erosion * Losses of productivity * Lack of firewood * Flooding of low-lying areas of basins and sedimentation	* Loss of soil productivity * Decline in biodiversity * Increase of greenhouse effect * Losses of soil productivity * Decreasing forest production potential * Increase in tropical diseases

Source: Leonard et al 1989:7

the insignificant achievements of nearly three decades of activity are the inadequacy of the institutional framework and its complex organizational structure.

At least one of the five principal limiting factors most often mentioned is of external origin; it is the complexity of the processes of management and supervision on the part of the international financing agencies, which introduced elements of administrative inefficiency between these institutions and the local executing agencies. The other four limiting factors are typically internal to the respective national institutional system and deal with: first, the excessively large number of participating institutions and the low level of coordination between them; second, the lack of sufficient cooperation between the various levels of action (national, regional, state and local); third, the lack of linkage between the government institutions and the grass-roots organizations; and, finally, the insufficient preparation of both the technical personnel responsible for the execution of the programs, as well as of its beneficiaries.

Despite the numerous activities that the countries of the region have put into effect to alleviate poverty, these have been insufficient to significantly slow the rise of social and spatial marginalization. In a global context, it can be maintained that the countries of the region have, in the last five years, allocated fewer public resources to social goals. The factors responsible for this decrease in available resources for social programs have been the financial crisis, the adjustment requirements, military expenditures, and foreign debt payments. However, an attempt to alleviate the problems of poverty has been made through compensatory measures, such as funds for social investment, designed for the short-term to diminish the negative effects of adjustment, especially in the poorest groups.

This situation, the result of an inefficient and, what is today, a strongly contested pattern of development, asserts the need to build a new administrative model, based on the decentralization of the functions that have traditionally been assumed by the State.

From this point of view, one of the tendencies in all the LAC countries is related to the processes of modernization and decentralization of the state apparatus, the main objectives of which are to increase efficiency, decentralize the decision-making process, and allocate resources to the municipal governments. The arguments in favor of these processes are that they would reduce public expenditure, redistribute responsibilities and functions towards the “administrative periphery”, promote the process of popular participation, and strengthen grass-roots organizations.

The response of civil society to the crisis

For its part, the civil society has reacted by strengthening its grass-roots, as well as intermediate organizations, in order to generate its own answers. Such is the case with the NGOs dedicated to social work and to the support of the productive activities of the rural population. Similarly, community participation has been increased significantly in the execution of alternative solutions to various problems, complementing and/or substituting the activities of the public apparatus which serves this sector.

The main causes that have accelerated the marginalization of certain regions and the impoverishment of the rural population are:

- a. Rates of economic growth insufficient to promote a significant increase in employment sources
- b. High rates of human reproduction
- c. Biases in the opportunities of access to assets
- d. Limited access to social services
- e. Biases in the access to options for development of skills and abilities
- f. Limited participation of the majority in political power

- g. Rise in the annual rates of ecological damage, due to irreversible losses of forest cover, erosion and salinization of soils, and decrease in water quality
- h. Institutional systems that are both inefficient and inappropriate for responding to the immense challenge of putting into practice a model of just and sustainable economic development.

If the countries of LAC do not take substantive measures to overcome these causes, by the beginning of the next millennium the poor populations of the marginalized areas will be far greater than the rest of the population. Undeniably, this disequilibrium could exacerbate social conflicts and take them to previously unknown heights, accelerating the process of damage to renewable natural resources as well. This coming together of critical factors (growing poverty, increases in population, and destruction of renewable natural resources) could cause a downward spiral in these countries which would be difficult to control.

Thus, social inequality could become acute if the national economic system fails to implement a strategy to transform its interactions and allow the greater part of its population to receive the benefits of the development process.

Conceptual elements of a strategy of sustainable regional development

Analysis unit

The discussion of a strategy of sustainable regional development (SRD) begins by considering a regional society as one composed of a set of social groups, each one of which is formed specifically by three basic structures: the socio-political, the socio-economic, and the physical-spatial. (Uribe 1985)

In this way, the regional society is seen as the basic unit of analysis and as a social-political structure in which different groups, in

seeking their own goals and using their relative power, have an important place in the process of making decisions to guide social and economic development. They determine, how benefits are distributed. This is a structure which is typically made up of relationships between regional powers, and in some cases, linked to extra-regional and/or central power.

The SRD methodological approach sees the regional society in its socio-economic-environmental dimension; that is, as a structure that has a productive organization through which it establishes the mechanisms of access to the resources for production, consumption and services.

This approach establishes the regional society as a spatial organization from a double perspective: first, in terms of the network formed by various groups located in settlements in a particular regional territory; and, second, in terms of its access to ownership and the handling of renewable natural resources. This spatial structure is of decisive importance, because it arises from the social, political, economic and environmental characteristics, and what's more, it establishes the scenario of opportunities and restrictions which condition the alternatives of the various social actors.

Seen from another angle, the concepts used to analyze and design spatial development alternatives make it necessary to recognize two central characteristics of this regional structure, as well as the degree of opening towards other regions and also its institutional, political and financial interdependence with other territorial entities. These characteristics are: i) a high degree of opening, which gives the regional society the quality of dependency of exogenous factors in the decision-making processes and administrative actions (this subordination generally conditions and modifies the regional development process itself, which loses a degree of freedom in its own operation ii) the systemic quality of the structures (socio-political, socio-economic, and physical-spatial), the degree of interdependence of which mutually conditions them in such a way that in attempting to modify one, the other two are necessarily affected as well.

These three basic structures join with functional systems of supply of services or goods to satisfy the reproductive and productive needs of the population; that is, education, health, housing, credit and marketing, among others. Thus, each of these systems adds a few specific elements in to the structures (Table 2). For example, the educational system crosses the power structures since they decide its objectives, contents, methodologies and goals; it participates in the economic structure in that any activity requires financial resources, and, finally, it also crosses the physical-spatial structure as a defining element of the form and the characteristics of the way space is utilized, by means of territorial allocation of economic activities and the location of their centers of activity.

Table 2. Relationship between structures and the functional system

STRUCTURES	RELATIONSHIPS	FUNCTIONAL SYSTEMS
Socio-political Socio-economic Physical-spatial	Of power Economic Spatial-access to RNR	Marketing Credit Technology Training Education, Health, etc.

Central elements of a strategy of SRD

The main elements of a sustainable rural development strategy are given below. The main goal of SRD is the equitable insertion of a region into the national economy. The SRD is a component of the national development model, which in turn, is dynamic, multidimensional and intersectorial; its supporting elements are equity, sustainability, and competitiveness.

Thus, the SRD strategy requires profound changes in the sociopolitical structure and in the economic relationships within each and

between all the countries of the region, and between them and their “commercial partners”.¹ In addition, the change required to accomplish the transition towards a more just society has its own direction and speed in each country, and both are determined by the current state of the political, social, economic and technological life of the country.

In other words, the concept of SRD is expressed in Al Gore’s daring plan to meet the global ecological crisis, one that should have as a general integrating goal the establishment, especially in developing countries, of social and political conditions that lead to stable and sustainable societies; that is, social justice, and equal distribution of land ownership, respect for human rights, adequate nutritional levels, basic health and housing services, high rates of literacy, and greater political freedom, participation, and accountability (Gore 1992)

There is a consensus between international organizations such as UNDP, FAO, ECLA and IICA, in the sense that in those countries in which more than half the population is poor, it is necessary to make drastic changes in all the components of the development model in order that equity become one of its short, medium and long-run goals, in order to provide the opportunity of a fulfilling life to all human beings (Streeten 1981).

Because of this, the concepts and mechanisms proposed for regional development and struggle against poverty belong not only to the economic field (UNDP 1992), but also to those dealing with:

- a Political participation and the improvement of democracy
- b. The tuning up of the “markets” to assure equitable access to the benefits of development
- c Increased possibilities to obtain new skills and technical abilities
- d. The coordination of development tools to assure the sustainable management of renewable natural resources.

These four elements involve questions related to inclusive modernization (Chiriboga et al 1991), which require the adoption of measures to assure the redistribution of opportunity, with the aim that the majority achieve a level of income that would allow for the satisfaction of its basic needs.

On the other hand, from the point of view of spatial equilibrium of sustainable development (between regions) within the countries the proposal posits, as a basic principle, the need to make the effort to integrate and make viable the use of renewable natural resources and the organized social and political structures, to consolidate the presence of endogenous forces to stimulate a sustained process of regional development. This type of development should aim especially at the equitable satisfaction of the basic needs of all strata of the population in marginalized regions, and secondly, at long-run development goals. This requires that a significant portion of the capital generated within each region be reinvested in it, promoting diversification of production.

Such a strategy requires a reformulation of the *modus operandi* in the use of economic, social, political and ecological resources available in each region. To implement this in practice requires that the strategy:

1. Make viable the natural and human resources of each area. This requirement implies designing and executing mechanisms and tools to facilitate equal access to ownership and /or the use of renewable natural resources, e.g., land, water and forests. A specific policy to make viable new sources of production and employment will significantly increase the possibility of raising the living standards of the poorest strata in each region; this will have a multiplier effect through the significant increase in effective demand, with an increase in aggregate demand for goods and services and will act as an element in the productive structure of the regional economy.
2. Match regional supply with the endogenous demand. This requirement implies a special effort in promoting/directing the

regional supply of products, goods and services. This presupposes giving a certain priority to the allocation of regional resources to satisfy its “basic needs”.

3. Articulate local and regional functions. This requires an organic integration of the decision-making agents at the national, regional and local levels, aimed at making coherent use of regional resources, prioritizing investments with extra-regional resources and obtaining resources from international sources. Thus, institutional agencies must be created or consolidated with specific mechanisms to promote and ensure a broad participation of the civil society in the process.
4. Promote technologies appropriate to the ecological, economic and cultural characteristics of each region. The aim here is to optimize the use of the more abundant resources in each region; this preference could result in labor-intensive investments and/or technology or, in the worst case, in a combination of factors that reflect their relative scarcity. The technology promoted should be chosen with an eye to the ability of the population to learn to use it , as well as to its cultural model Ideally, the “choice” of technologies , and, in general, the investment alternatives, should be incorporated into the participatory process.
5. Reestablish demographic and environmental balance. The implementation of sustainable rural development activities assumes the explicit incorporation of a long-range vision, in which case it is necessary to analyze the sustainability of all investment proposals. In other words, both negative environmental externalities as well as the relevant measures for their control or elimination must be identified. The design of the regional development plans must have a balanced investment portfolio; production activities will be complemented by others of development, conservation and preservation of renewable natural resources. It is equally important to promote a strategy for demographic planning.

6. Improve production support infrastructure. To revitalize development in a certain region requires a network of roads to allow for efficient socio-productive integration, at both the intraregional as well as the interregional levels. It is vitally important to strengthen the connections between small villages, rural areas and urban centers of a region, in order to complement the connections between the interregional urban centers.

Sustainable regional development

SRD deals with crucial issues of the development patterns, such as the type of economic and productive growth, the appropriate technological change, the division of political power, the redistribution of income, the equitable access to opportunities to improve skills and abilities and a rational management of the renewable natural resources. The basic aim is the spatial reorganization of the national society. To achieve spatial and socially balanced development is undoubtedly one of the greatest challenges facing the countries of the continent in the next decades. This premise includes in an explicit and definitive manner the long-run aspect of the process of economic development.

The pace, scope and coverage adopted by the various SRD proposals in each country, as well as the role to be played by the public sector and the central government, are subject to the political, social and institutional context of each nation.

Specialized agencies seem to have reached a consensus about the main role to be played by the central government (CG) in guiding and controlling the deviations in the markets both in their characteristics as in the types of exchange which they process; thus, special attention is paid to the origins and causes of the "negative social externalities", such as the spatial concentration of the population and of activities of production. In other words, the state will take an important role in decentralization and SRD in the effort to overcome the historic inertia of centralization.

From the territorial point of view, this strategy aims at the greatest possible degree of autonomy for the regions in designing their own solutions so that the social actors themselves (workers, political leaders, technocrats and entrepreneurs) become dynamically involved in the planning and development processes of their regions, and incorporate social equity among its prime objectives.

Similarly, it is important to note the role of the central government as a promoter and facilitator of the changes in the regional comparative advantages, based on the sustainable use of the most abundant factors of production in such a way that they strengthen its productive base so that it will become the primary promoter of SRD, with long and short term social objectives.

Using the case of Africa and the United States, an approach towards sustainable regional development has been suggested; it is based on these five factors:

Social sustainability. The process of economic development implies a process of income and asset distribution, as well as a significant improvement in the rights of the majority of the population and a drastic reduction in the gap between the standard of living of the poorest groups and that of the rest of the society.

Economic sustainability. This is made viable by a sustained flow of private and public financial resources, their allocation and efficient management and a favorable macroeconomic context.

Ecological sustainability. This requires the rational use of the resources of various ecosystems in the long run, promoting ecologically appropriate technologies and agricultural and forestry activities with regenerative capabilities.

Geographic sustainability. This characteristic implies the strengthening of activities of production which accelerate the

spatially balanced development processes; in this way , demographic concentration in urban areas and/or in ecologically fragile areas is reduced; similarly, indiscriminate use of territorial space is minimized and the process of colonization strictly directed. This requires new balances between rural and urban activities, with special attention given to conservation and preservation of natural resources.

Cultural sustainability. This is perhaps one of the hardest characteristics to achieve, since it implies a process solidly based on endogenous roots; they allow for a process of change in the context of cultural continuity (hence the multiplicity of paths to modernity As Alain Touraine argues, we must translate in a normative manner the concept of sustainable development into “pluralizing” instruments.

Studies conducted in northern India have also arrived at similar conclusions The concept of sustainable de development includes : i) increasing economic welfare without endangering future welfare ii) appropriate management of renewable natural resources iii) use of the resources, assuring social equity, and iv) use of the resources for maintenance of cultural and biological diversity.

Natural Resources

Natural as well as cultural resources must be the at the heart of any development strategy and will affect the range of its organization and application.

The role of natural resources in traditional development models has been to support the production of goods and services; they have been valued in terms of the cost-benefit ratio established by the market, which does not take into account the environmental costs of their use.

This has led to an inadequate view which has contributed to the irrational use of natural resources, resulting in the destruction of the

resource base, which, as previously stated, supports not only the economic activities of the region, but life itself in the biosphere.

The government-region-locality relationships

SRD requires a process of modernization with state decentralization, which is occurring in the majority of countries of the region; this implies reaching political and spatial balance, effectively incorporating local governments in decision-making processes, with equitable access to the benefits of economic development. This will in turn help resolve the restrictions arising from the imbalances in the socio-productive relations in the regions (Zorro 1984).

This development approach also implies a dynamic dimension, reflected in significant changes in the quotas of political power of the various social groups. What is proposed, in effect, is a new order in which the least advantaged become "participant actors" in the process of development of the society.

The above demands a restatement of the interaction between the central and provincial and/or local governments, or, in general terms, between the "central state" and the "region". This relationship is a central element in this proposal, since the agencies share specific responsibilities which imply the formulation of concrete linking mechanisms capable of making viable the efficient and effective design and execution of policies, programs, and projects.

The State affects the economic growth of the regions through two means: a) the process of distribution of public resources via current expenditures, and the investments in social and productive infrastructure, among others; b) macroeconomic and sectorial policies, the direct or indirect impact of which affect each region differently. In other words, the set of economic policies is not spatially neutral from a spatial perspective. When these negative effects are not clearly identifiable, they require a means of negotiating between the State as a public apparatus and the region as the "social actor", with the aim of achieving a balanced regional development.

It is especially important, in the latter case, to point out that the allocation of financial resources to a region is a necessary but not sufficient condition to encourage its development. In order to consolidate development in the long run is it absolutely necessary to have a "regional society", with its institutions, an organized political class, grass-roots social organizations in full political participation, and a entrepreneurial class, capable of putting together a socially coherent and dynamic social project.

The experiences with rural development confirm that one of the major problems faced by marginalized regions is the inability of the population to participate in solving its own problems through traditional institutions. This confirms the complexity of the issue, since there is not only one problem in the process of institutional adaptation but rather as many problems as there are institutions, and , at the same time, there can be as many institutional combinations as rural development programs.

The central problem may consist in that the processes of institutional construction have historically excluded the poorest "social actors", who,omitted from the process or seen only as "recipients" or "users" of said institutions, do not see their interests or views reflected in it them; in this way, a division occurs between spheres and social groups that should be integrated into the entire process instead .

II. SOCIAL ORGANIZATIONS

Both the grass-roots organizations (GROs) as well as the non-government organizations (NGOs) for management and technical support have played a historically crucial role in the development of the agricultural sector of the countries of the continent. In fact, many of the benefits to which the various social groups have access today are due to the efforts which the former have brought about with the aid of the latter. Therefore, their participation is deemed fundamental, given their importance and the central role they can play, complementing the activities of the public sector. The experience in Latin American countries shows that some of these agencies have shown a special ability to modify patterns of individualistic conduct and change them into patterns of cooperation and organized action, as is the case in Brazil, Chile, Costa Rica, Ecuador, Guatemala and Mexico, among others.

Among the main elements discussed in this chapter are: i) the environment in which these organizations function; ii) their objectives; iii) organizational and functional structure; iv) the possible factors affecting their capability for response.

Characteristics of the environment and its effect on social relations

The capability for response of social organizations is determined by two fundamental elements: its own function/structure, and the environment in which it carries out its activities and which affect its conduct. In a broad sense, the environment refers to all those elements exogenous to the organization which may, in one way or another, affect its capability for response, and thus, the conduct of its members. Thus, the political context, the State structure, the characteristics of the greater institutional system, the characteristics of the clientele, and the political economy, all form part of, or, broadly speaking, define what is known as environment (Mintzberg 1979).

It is important to point out that there are three characteristics of the environment that must be borne in mind during the process of designing and or strengthening social organizations: stability, complexity, and diversity.

Stability. The environment of an organization may vary from stable to unpredictably dynamic and constantly changing, as a result of the impact of a number of factors such as the degree of political stability, unpredictable changes in the economy, drastic modifications in the needs of the target population, rapid technological change, and even natural disasters. In short, the degree of instability of the environment is born not only of its own dynamics, but, especially, of the unpredictability of certain events. A dynamic environment, in the sense we mean here, automatically implies a great likelihood that the organization function without parameters and with working variables which would be impossible to establish in the short run.

Complexity. The environment of an organization may vary from very simple to extremely complex. Let us take the case of an organization whose sole purpose is to provide training to technicians on certain aspects of management of a technological alternative, and of another whose purpose is rural development. In each case it is possible to visualize scenarios of very varied degrees of complexity from the institutional, financial, and political points of view as well as that of the clients themselves.

The degree of complexity of the environment affects the structure of the organization because of the difficulty of clearly defining its own functions. In other words, the complexity of the context requires that the organization manage a number of variables and information which may saturate its ability to manage, and hurt its ability to carry out its activities. Rather, it is easier for the organization to trim its objectives, define its functions, design its work plans and prepare a body of professionals when it is part of a whole of clear and manageable information.

Diversity. This characteristic is closely related to the previous ones and deals directly with the conditions imposed by the degree of heterogeneity of the clients requiring the services offered by the organization.

Thus, the diversified demand for services by the beneficiaries of a rural development program, such as credit, technical assistance,

training, marketing, among others, is contrasted with a limited demand, by a reduced number of producers, for the same services for one particular crop.

In short one can say that the diversity of demand of services determines the objectives, the type of functions and the complexity of the organizational structure.

Finally, the concern over the effect of the environment in organizations is related to the degree of flexibility and the capacity of adaptation that these have to adapt to the dynamic of the demands of its services; that is, the potential of the organization to understand, predict, negotiate and face successfully the changes surrounding it.

The experiences of rural development in the last two decades have pointed to a few key elements which have limited the degree of success that the programs and projects undertaken have had in their efforts to promote the strengthening of the GROs and NGOs.

The following discussion summarizes the controversial factors that are often mentioned as problematic to the successful execution of rural development projects with grass-roots participation.

Spaces for organization-building

The generation of "spaces for organization building" is one of the elements that must be understood and used to facilitate the promotion and consolidation of grass-roots organizations. In this case, it refers to the real possibilities created so the rural populations may effectively maximize their potentials, increase their cohesiveness as a social group, improve their skills and abilities and perfect their pre-disposition towards group work.

In order that an organization mature (evolve from a simple work group to a productive organization) it is necessary that all its members have spaces for institution-building and participation. It is

important therefore that the “external agents”² as well as the organization’s leaders themselves make special efforts so that those spaces be permanently present and that each project activity become a participation space.

Equally, the experience in rural development projects has shown the conflict arising from its beneficiaries’ exclusivity.. This problem seems to be an intrinsic part of any activity of this type, and has resulted in the formation of undesirably exclusive groups. In fact, very often the beneficiaries of certain projects are considered representatives of a particular social or ethnic group; however, in practice, they are just a subgroup of a spatially heterogeneous “society”, “chosen” on the basis of certain criteria, such as land ownership, credit or others. This type of arbitrary “selection” is directly reflected in the degree of difficulty which would exist in promoting the organization of a set of persons with limited interests in common..

The aim of this discussion is to argue that the ability to advance an organization depends primarily on the homogeneity of its members, its shared interests , and the degree of motivation that they share. Heterogeneity induces in practice the formation of groups which are less participatory and less democratic. This happens when two or three members are much more qualified than the rest of their colleagues.

To summarize, the degree of success of an organization seems to be greater when the composition of the group is relatively homogeneous, the number of members is smaller, and the members share a number of interests .

Grass-roots social organizations

In order to understand social organizations it is necessary to identify its two central elements: its internal capacity to carry out its functions and resolve its conflicts, and its external capacity.

The internal capacity of an organization refers to those elements of collective management of resources and the ability the organiza-

tion has of optimizing them in carrying out its functions. Its external capacity refers to those elements involved in its capabilities mediation, negotiation, and execution of services with government institutions and other private agencies which have various types of power.

The internal capacity of an organization deals with the activities that ensure its successful management, such as planning and definition of its objectives in the short, medium and long run; the design of work programs, the acquisition and handling of financial resources from international or national sources; the resolving of technical and/or administrative conflicts; the management of information for follow-up, evaluation and handling of external pressures, etc.

The external capacity is related to the organizations' s ability to relate to the context in which it operates, to the government agencies and other organizations, to manage processes of market positioning and negotiation and, to realize the demands of its target population and conduct the external relations of power-actions.

Table 3. Capabilities of the organizations

Internal capability	External capability
To plan and define objectives	To understand the external context
To mobilize resources	To generate connections and alliances
To manage resources	To respond to demands
To manage conflicts	To negotiate with public and private sources of power
To manage information and data	
To manage external pressures	

Typology of organizations for technical and organizational mediation

A detailed review of the main activities carried out by NGOs in technical and organizational mediation in LAC yields a typological assessment. Two variables were taken into account to “group” de NGOs: first, whether they were directly involved in the carrying out of community projects or whether they were rather mere providers of “technical assistance”; and, second, the type of activity carried out.

Execution of grass-roots projects

- Production activities
- Social activities
- Organizational and administrative actions for either of the above

Strengthening of the grass-roots organizations

- Technical cooperation
- Training of trainers
- Project design
- Applied research
- Publications
- Communication tools

The State and the strengthening of social organizations

The State plays a crucial role in the promotion of social organizations since, with its normative and legal apparatus it can modify and change the environment to make it “organization- friendly” (UNESCO 1990). There are many areas of governmental action that can be reformed to renew the “environment” and advance social organizations. The principal ones are:

In the political area. First, in the area of political participation it is imperative to take strong governmental action to make viable the transition from discriminatory structures towards others which will ensure the organized participation of the rural population in the process of

sustainable regional development. These changes should be accompanied by processes of deconcentration and decentralization of power, with the aim of strengthening grass-roots organizations.

In the legal area. It is necessary to carry out serious changes in the legal apparatus, with the aim of generating clear and flexible norms to help in the formation and strengthening of grass-roots organizations, in accordance with the needs of their clientele.

In relation to the institutional system. Government institutions involved in the process of SRD should have a transparent and well-defined normative framework, with the aim of promoting the greatest possible degree of spontaneous generation of various types and forms of social organization; the biases towards certain forms which imply the exclusion of others must be minimized.

In relation to economic policy and of market control mechanisms, it is essential that the State guarantee the transparency of the market, controlling the inefficiencies and distortions in it, such as monopolies or "cartels" between a few sellers of agricultural inputs and consumer goods, or of monopsonies in the purchasing of their products. The purpose of this is to consolidate market structures that will make the organizations financially viable.

Additionally, the public sector can also carry out a series of actions to strengthen the organizations internally. They can, for example, design working methodologies, mechanisms and tools that enhance the formation of organizations based on the real interests of the members themselves. This will generate a solid base with objectives and a homogeneous membership, contributing to the formation of a dynamic, stable and democratic organization.

The democratic working of the organization will also contribute to an open and transparent debate on its objectives, functions, and activities, and, in general, to the participation in decision-making processes.

One of the major contributions of the public sector to the strengthening of the social organizations is in terms of the process of training their members.

III. INSTITUTIONAL SYSTEMS

Some conceptual elements

From a conceptual viewpoint, sustainability crosses, from various angles, every single one of the major academic disciplines related to agricultural and rural development. Thus, natural scientists and agronomists tend to look at the problem of sustainability in terms of the impact of production practices on renewable natural resources in the long run. Such a view of the problem leads them to preoccupy themselves primarily with production practices and technologies that will ensure a reasonable use of natural resources, while at the same time continuing to produce growing quantities of food.

On the other hand, economists are less preoccupied with the ecological side of sustainability and more with determining the trade-offs between economic growth and the preservation of the environment. Thus, they tend to focus on the distortions of the market, resulting from actors exogenous to the economic system, which could reduce economic growth and employment.

On a smaller scale we find the specialists in administration whose unit of analysis is a project or a program; their major preoccupation is the sustainability of this working unit from the point of view of the percentage of work executed versus the goals and the cost of the resources.

In other areas such as health and education there is also a growing interest in sustainability; in almost all cases the major concern is in terms of administration of processes.

Despite the conceptual and operative differences between these various "views of sustainability", the underlying theme connecting the view of the natural scientists and the environmentalists, and the economists and administrators, is the need to have a basis of social organization capable of successfully facing all the facets of development. In fact, the institution arises to solve the environmental prob-

lems of commercial and traditional agriculture, to ensure the transparency of the markets, to generate appropriate technology, to train rural producers, technocrats and bureaucrats; in short, to deal with virtually all the problems of sustainable development, both human resources and institutions play a fundamental role.

Social institutions arise as tools to respond to specific needs of a group of persons; however, these do not always achieve their goals. This is the case of the institutional system responsible for the development of certain regions, which, due to a lack of institutional skill in achieving particular goals, fall by the wayside of the process of economic development.

From the point of view of institutional inadequacy, the SRD paradigm is instrumental in promoting a different institutional system to overcome the deficiencies of the traditional system and be able to reach high levels of response to the problems of the population which are its *raison d'être*. In short, an important component of the SRD programs deals with institutional adjustments of the traditional agency and/or the promotion of new social institutions.

What we mean by "institution" has to do with the organized capacity of certain entities to fulfill their social, economic or political function within the society. In this way, institutions are conceived as instruments for regional development; from a wider point of view, they should also facilitate, promote and encourage the various social actors to participate and react to the changes inherent in development.

Similarly, the very dynamic of the process of development demands that the institutional system, in its widest sense, be conceived and visualized as an agency whose individual components be sufficiently flexible to adapt continuously to the changes external to the system, while having the creative capacity to become promoters of change.

Thus, institutions should become catalysts of change and of development.

Our challenge at this crossroads is to define how we can learn from experience to design coherent institutional systems with the global goals of national economic development and regional development in particular. New capabilities must be developed in order to recondition institutional systems adequate to the goals of SRD so it can function efficiently and effectively. This includes well-defined structure and goals, integrating on the one hand the national with the regional and local levels, and on the other some public institutions with others from the private sector. In a way, the consolidation of the process of institutional decentralization will strengthen the bonds between the various institutional actors.

To summarize, sustainable regional development institutions must be conceived as true instruments of change in terms of the attitudes and conduct of the various social actors.

The minimum requirements for the existence of an effective SRD institutional system are as follows:

- a. Human resources trained to attain the proposed goals.
- b. A flexible and agile organizational structure, one that can adequately respond to the requirements of the social groups it serves.
- c. Efficient mechanisms to link it to the other components of the institutional system, e.g., those of the regional or national level, so that those levels may be able to work with enough autonomy and independence from the central level, and may serve as negotiating agencies between the various levels.
- d. Sufficient financial resources and physical infrastructure to attain its objectives.

Trained human resources

The specific demands of SRD include special requirements in the training of the professional staff of the institutions of the public and of

the private sectors. In fact , it is important to complement the professional training of the experts with special skills so they may be able to face a very complex reality, with social, political, production, and other problems, and one in which one would like to place special emphasis on the ecological issue.

The training of the technical staff of these institutions requires the formulation of specifically designed training programs, with the aim that they may, in practice, respond to the demands of the social groups they serve.

As we shall see later, the training of human resources is a two-way street: on the one hand, it demands activities so the technicians will internalize knowledge and methodologies that will make viable the understanding of a complex reality and assure and efficient relationship with the grass-roots organizations; on the other, the "clients" must have a minimum level of knowledge and skills in order to be able to participate effectively in their process of development.

Flexible structure and organization

The structure and the organization of institutions must have a high degree of flexibility to fit easily with the diversity of the "context" to which they belong. . Thus, the central goal of this aspect is to ensure that its functioning is in keeping with the values and beliefs of the local societies. This of course does not imply laxity in norms and regulations ; on the contrary, the social and economically efficient workings of the institutions relies on the existence of these norms and regulations.

Similarly, the degree of flexibility of the organization guarantees the local and micro regional institutions a higher level of autonomy , which would be necessary to respond quickly to the needs of its clients. This institutional flexibility should be related to its structure, administrative organization technical content, operational methods, annual work programs, financing mechanisms and criteria for the prioritization of investments, among others.

Linking mechanisms

One of the most important characteristics required of institutions involved with SRD is their ability to remain permanently in tune with in their environment, in two ways. First, there is an urgent need of liaison between the "regional/local institution" and its clientele, specifically in terms of the process of participatory planning which should accompany SRD. Second, it is crucial to assure efficient linkages between regional and local levels, and with the other levels of the institutional system which control its *modus operandi*.

In terms of its linkage with its clientele, it is often the case that because of the permanent isolation of the micro-regions and marginalized localities, that the population in general and in particular the rural populations are less informed about formal institutional systems; very often these populations find themselves at an primitive level of adjustment

On the other hand, in the case of relationship with "other levels of the institutional system" it important that the "regional/local" institution" and its technical and management staff develop the ability to incorporate explicitly the needs coming from the high levels of the institutional system; this will strengthen its ties with its immediate environment, and will allow for responses aimed "above" as well as "below".

On the local level, in the process of decentralization are defined the new responsibilities of the municipalities, which require that these adopt precise, agile and efficient tools to link with the regional and local institutions, which will assure their insertion in the structures of local government.

The efficient and participatory liaison between institutions and the local or regional societies requires that the social actors be trained and have a minimum amount of knowledge and skills that are not always in fact found in the rural populations of the marginalized regions or areas. This may well be one of the greatest challenges to be overcome in achieving successful execution of SRD proposals.

The training of human resources is, in this case, geared to peasants, small farmers, wage-earners; in other words, to those social actors present in the territorial spaces undergoing intervention. Any actions proposed for training human resources should therefore be conceived pragmatically: the aim is to make viable the access to certain services or activities. In other words, training should be geared to tangible tasks and short-run results.

Adequate financial resources

Last, but not least, the viability of any SRD proposal will depend on the availability of financial resources.

Historically the basic characteristic of the sources of resources allocated to finance institutions which promote productive and social activities in marginalized regions is their dependence on their being transferred from other regions. In fact, a great number of these have always come from more developed regions; however, regional and/or local institutional systems should also create their own financing mechanisms to ensure that a growing number of resources come from their own contributions.

It has also been noted that it is important that these local agencies create their own mechanisms for auditing and financial control to minimize the notorious deviations of funds.

In the view given in the first paragraph, regional development requires a drastic readjustment of public and private institutional systems which are responsible for the promotion and execution of economic development activities.

Local governments

Some of the elements of the decentralization process could actually hinder local governments unless efforts be made which are specifically geared to institutional strengthening at this level; a typical example is the case of fiscal decentralization (Cochrane 1983). In

fact, the central government (CG), besides having to create and guarantee the mechanisms for transfer of funds to the local governments (LG), must also initiate complementary activities specifically designed to strengthen their management ability.. It must be emphasized that interventions to improve the abilities and skills of the LG are not easy task nor are they short run efforts. In fact, in this case perhaps one should plan for actions to run longer than ten years.

Local governments undoubtedly have the potential to promote development through their ability to increase the participation of the local population; its level of operational efficiency could be greater than that of the central government, and it increases the spaces for democratic practice. SRD is not posited in a context of a process of decentralization in which the CG and the LG are antagonists; on the contrary, the autonomy of the LG is of fundamental importance so that they may be able to fulfill their basic functions, but the permanent cooperation between them both is equally fundamental to the successful achievement of development activities. However, this "articulation" between the CG and the LG must be seen as a typical long-term, time profile, with explicit plans for a gradual implementation and with precise goals in terms of generation of income, personnel management, and the definition of responsibilities.

Perhaps one of the greatest challenges faced in the process of regional development is the effective incorporation of the rural population in the decision-making processes of the LGs and the CG. In order to ensure that the civil society once again believe and trust in its governments, it is necessary to adopt a series of measures to strengthen the LGs, such as:

- Strengthen the political mechanisms that ensure participation in the decision-making process at the local level.
- Train personnel from the LG and the civil society.
- Ensure technical cooperation specific to the LGs

- Encourage the efficient flow of information
- Establish two-way communication— the State towards civil society and vice versa.
- Ensure the implementation of fiscal mechanisms

This latter element is crucial to making development activities at the local level financially viable. This can be achieved in fact through various formulas and fiscal mechanisms arising from the CG as well as from the LG themselves— either way the goal is the same: “strengthen the LGs”. Such is the case in Brazil, Chile, Colombia and Mexico, where the CG created and imposed a national a tax to generate funds specifically allocated to the municipal governments.

Whatever the case, these fiscal mechanisms mentioned above should be designed to achieve a greater equity in the tax system, affecting private sector activity as little as possible and obtaining, in turn, additional funds to promote development in the marginalized regions.

IV. ELEMENTS FOR A PROPOSAL OF SUSTAINABLE REGIONAL DEVELOPMENT

The arguments set out in this chapter focus on regional development, conceived as an integral part of a national strategy whose special emphasis guides the execution of actions at the municipal level and or at the level of other regional administrative or local units. The proposal is directed at the possibility of changing the context of the spatial scenario, modifying the relationship between the civil society, the State and the market. From the point of view of development, the social and productive activities encouraged are ones which would activate, through the "markets", the ties between rural areas and the populated or urban centers, paying special attention the functional articulation between small, medium and large producers, and taking advantage of the links with food chains and other modern means of product processing . In other words, the proposal focuses on activities at the regional and/or municipal levels.

This conceptual development geared to regions has its origins in the institutional mandate of IICA , and, additionally, is based on the following assumptions) the responsibility of other specialized organizations which, using their comparative advantages, formulate the elements of the matrix related to the urban sector b) the need for an institutional agency suitable to organize the various parts of a national strategy into a coherent and harmonious whole.

A. National level

Conceptual elements

In the following list are given those conceptual and methodological elements that are crucial to a national SRD strategy (conceived as an instrument in the struggle against poverty), inasmuch as they are requirements for regional and local development.

The actions of the strategy

In order that the actions of a national strategy meet the critical financial situations affecting the countries of the region and ensure a

significant coverage of the population located in the marginalized micro regions, given the gravity of the situation, these actions should have the following characteristics:

Synergy. This refers to the search for complementary nature of the actions of the various programs, in order that the sum of their effects be greater than that of their individual effect; therefore, it is necessary to carry out certain joint activities, and the same time impact the target micro regions..

Time—permanence. The actions of the strategy must be permanent , so that their effects can eliminate the causes of the problem.

Increase in efficiency. The actions should facilitate the improvement of the capacity of self-satisfaction of the basic needs of the beneficiaries themselves.

Group and spatial targeted demand. The marginalized micro regions and the target groups which will be served first must be precisely defined. Once this is done, it is suggested that priority be given to activities, projects and programs of productive investment, and not to those of immediate consumption.

Definition of basic needs

Basic needs are those which are necessary for the preservation of life and for the development of the potential of human beings. They may be material or non-material.

Material basic needs. Access to sources of work and to services such as education, health, food, housing and drinking water.

Non-material basic needs. The conditions which all persons require for their normal development: security, self-fulfillment , and political participation.

Levels of needs We are not attempting a methodological discussion about what constitutes an “adequate” level for each need. Each

country will have to evaluate the possibility of adopting the list proposed by the United Nations (UN) of the types of basic needs and their minimum levels of acceptability.

Target population and goals

In order to determine the scope of the institutional structure, and the number of staff and amount of financial resources required to carry out a SRD strategy, it is necessary to determine precisely which micro regions, municipalities or other administrative units are targeted, as well as the number of inhabitants that would be served by each and every action.

Similarly, it is important to define the goals one hopes to meet for various needs, taking into account the present level of the relevant indicators, the level to be attained and the proposed time-frame in which to achieve them.

In order to formulate a national and regional program one could use the method of designing three future scenarios, to visualize the institutional, financial, political and organizational effort that each one of these implies, and at the same time, define the improvements expected for each vulnerable group by region, as well as defining a base line for ex-post evaluation.

For the target years defined in the three scenarios, matrices must be constructed with the indicators and costs and institutional structures required to achieve them. Each selected time frame will show the levels of the indicators; in the final year, all the micro regions will have attained an equitable level of development defined a priori as acceptable in terms of the "minimum income levels" and of basic needs.

The gap in basic material needs which needs to be closed will obviously be different in each micro-region; therefore, the time frame, the volume of resources and the institutional system required should reflect these disparities. This will help generate an matrix of actions, costs and institutional needs by micro-regions.

For the above, the micro-regions considered would have socio-economic and ecological similarities, such as, for example, basins, micro-basins, or set of municipalities.

The constructions of scenarios would have as a basis a “ diagnosis of regional and micro regional poverty (distribution of income and access to opportunity) and of the situation of renewable natural resources” of the kind that UNDP makes , in suggesting the importance of formulating a “human development plan” for each country that has as a basis a diagnostic of the needs and potential of its human resources (UNDP 1992). Gender differences and specifics in the urban and rural populations, as well as at-risk groups in each region, should be given special attention.

General measures to be adopted at the national level

a. Promote a social pact with broad political support

A long-run SRD strategy with the range here proposed should be able to rely on the firm political support of the various parties as well as of the Senate, the House of Representatives, and economic groups and unions. In other words, the management of the strategy should product a new social pact, in which all the national political and social sectors are represented.

Once this is accomplished, it is necessary to define a suitable institutional agency, having total support to guide and formulate the program.

b. Conduct a rapid national diagnostic

The aim of the diagnostic should be to determine the demographic characteristics (by social group of the poor populations) and also the potential of the renewable natural resources for each region. This diagnostic will be based principally on existing information; its cost and time of implementation should be minimized.

c. Harmonize the SRD Program with macroeconomic policies

The only way that marginalized regions can overcome their conditions of poverty in the long run is to implement a process of stable economic growth. The idea of an “spillover “ as a distribution mechanism is insufficient to respond quickly to present social needs. This opposition between the policies of growth and redistribution is a conflict between the long and the short terms, which we leave to each country to resolve according to its own political, social and economic possibilities.

If one aims to eliminate poverty within the next decade, “spillover” as a major instrument is insufficient, and three or more decades may pass before the countries can come close to this aim. Therefore, in order to overcome poverty in a significant manner it is necessary to strengthen the economic growth of the countries, while at the same time carrying out specific distribution policies. This requires maintaining a delicate balance between productive and social investment in both the short and long run.

Although the policies of adjustment have defined the broad outlines of the changes, there are some general measures that can be used to encourage improvements in the rural poor populations, such as for example the decrease of the rates of inflation, the strengthening of land titling for small farmers ,and the improvement of access to credit and to technical assistance.

In keeping with the conceptual orientation being given to the SRD policies, it is deemed of utmost importance to increase real income, be it through the creation of employment or through the raising of the minimum wage, in relation to the increases in labor productivity.

Employment programs must have priority; they should be complemented by training programs, so as to maximize the natural synergy between them.

Equally, social investment programs such as education, health and nutrition are of fundamental importance, since they allow access to opportunity to improve human capital, giving people new skills and a greater physical ability to overcome the adverse conditions they face.

Another tool that can strengthen a national SRD Program is that of fiscal incentives, which may be applied to private production investments adopting labor—intensive technologies in the marginalized regions.

Similar to incentives are certain types of productive investment, such as reforestation and the fomenting of irrigation and other projects. In these cases, one can appeal to the synergy of the productive and the social realms while complementing public and private efforts.

d. Articulate the SRD Program with agricultural, forestry and rural development programs.

It is crucial that the SRDP activities incorporate those actions which are characteristic of rural development; that is, regional activities geared to the increase of productivity and the strengthening of the organization, the benefits of which are micro units and small family farms, which can benefit from the support of nutritional and employment programs.

e. Create a National Fund for SRD

Probably the most suitable instrument for promoting development in the marginalized microregions, and particularly of alleviating rural poverty, is the creation of a specific mechanism to make financially and technically viable the new ties between the civil society, the State and the market. The structure and form of operation of this mechanism should be flexible and efficient, if possible managed under the co-responsibility of the national, regional and municipal authorities. Additionally, the efficiency of this “mechanism” should

be ensured by limiting the participation of the public sector, sharing responsibility and management authority with the private sector, and, principally, with the participation of grass-roots organizations.

This “mechanism” will endow resources to the relevant local agencies: municipalities, cooperatives or other forms of social organization. These in turn will assign financial resources in accordance with the specific proposals arising from the communities themselves, efficiently and synergistically.

The aim of these resources will be to finance small agricultural and non-agricultural production projects which create jobs.

f. Strengthen and create human resource training programs

The development of human capital is a sine qua non condition for achieving the goals of equitable development; in fact, the improvement and/or increase of skills is essential to ensure people’s access to formal sources of work and the increase of their income.

Therefore, it is suggested that special efforts be made to take advantage of the productive and social activities financed by other components of the Program to complement them with training activities specifically designed for that aim.

g. Link the SRD Program with family planning programs

Any strategy designed to overcome the marginalization of certain regions must become closely linked to existing family planning programs in order to ensure a demographic transition to lower rates of reproduction.

h. Prioritize public investment and coordinate it with private investment

The national budget must be formulated in such a way that there be a prioritization of the public investments by regions, complement-

ing the resources of the National Program of SRD (NPSRD) which have been assigned to investments in social programs and in production infrastructure.

i. Seek possible alternative forms of financing.

In order that the creation and execution of a NPSRD of this scope be successful, several sources of financing must be sought, be they national or external, such as the following:

- Own funds. Social policies could be partially funded through taxes in as far as the increase in expenditures not result in a drastic decrease in the government funds available for productive investment.

Possibly the financing option chosen should assign national resources stemming from an internal reallocation and from privatization with decentralization of certain activities to local governments, producer's associations, cooperatives, etc.; that is to say, grass-roots organizations. In this way the equality of opportunity to access to the services in question is increased and the process of democratization is reinforced.

- Reformulation of the National Budget. In the context of the phase of democratization initiated in the Region, it is valid to imagine formulas which allow for the reduction of military spending to the lowest possible level and reallocation of these resources to social spending, for example, for education, health and housing.
- Reallocation of taxes. This is another possibility that would not affect the rates of inflation; it is viable to impose 2% tax on luxury items, and assign the amount collected to a special fund for the NPSRD.
- Strengthening the mechanisms of control and collections of taxes. The World Bank itself has promoted and encouraged

activities that improve the efficiency of the collections of taxes, which, in general, suffer from evasion in the millions.

- Promotion of joint ventures. Joint ventures and sales of services between the public sector, the private sector and the producers' organizations make feasible the use of the skills existing in the informal rural and urban sectors (populated areas) .
- Macroeconomic policy. The countries should negotiate with the bilateral financing organizations the design and the execution of "multiple objectives" macroeconomic policies; these should include the objectives of economic growth and the social objectives which, in being to all effects treated as part of only one model, will lead to the consolidation of more equitable national societies.
- Foreign debt. An important part of the savings of a country is transferred abroad to pay the interests on foreign debt, which becomes a gigantic obstacle to making investments, be they productive or social.

The greater availability of resources arising from the alleviation of foreign debt, be it through an economic or a political solution, must as first priority be used in social expenditure. In this context it is important to emphasize the argument of the shared responsibility between debtors and creditors; hence the need to reevaluate the situation: "Wealthy countries can no longer insist that Third World pay huge sums of interest on old debt even when the sacrifices necessary to pay them increase the pressure on their suffering population so much that revolutionary tensions build uncontrollably." (Gore: 297)

The analysis of the alternatives of a different handling of the debt service is of special interest in this context. The discussion should reconsider a few options previously suggested, such as paying a part of the debt in local currency or reconverting a portion of it in activities linked to the equitable economic

development and to the conservation and sustainable development of fragile ecological systems. (Hinkelammert 1988)

- External resources. It is possible to have recourse to the Inter-American Development Bank (IDB), the International Fund for Agricultural Development (IFAD), the World Bank, and other sources.

B. Regional and local levels

Spatial approach

This strategy seeks to reinforce the efforts at decentralization, which, in lesser or greater measure, all the countries of the region are engaged in implementing. Thus all long-run NPSRD activities are to be geared to change in the spatial context, where social and economic relationships are effected and the relationships between the State, the market and the civil society are negotiated.

Additionally, and considering the high percentage of rural poor, a decentralized effort would result in greater autonomy for the regions in the decision-making process and the allocation of NPSRD funds. This view recognizes that, on the one hand, the authorities, the wage-earners, the small farmers, women, the society at the municipal and the regional levels, are the ones who best know their own needs and potential. It is precisely at these levels that the technical teams, their representatives of the local, regional, and of course the at-risk groups should design their solutions.

From the point of view of spatial equity, the strategy points in the direction of attaining certain minimum levels of welfare for all the inhabitants of each country. Additionally, this regional view will maximize the productive potential of the various regions of each country and will strengthen the ties between the rural areas and the populated centers; it will in this way contribute to the creation of jobs and to the economic, social and spatially balanced development

process, which may possibly increase the technical and financial capability of the region (or municipality) to act with a greater degree of autonomy.

In this context it is necessary to recognize the important part played by the municipal and regional movements of the civil society, in the struggle to improve its standard of living and overcome the differences and socio-economic regional inequalities. In fact, these movements can bring about opportunities for agreement and settlement, and thus strengthen democracy.

Equally one must recognize the important role that would be played by a financing instrument that would help said autonomy mature.

Municipal Fund to Fight Poverty (MFFP)

The municipality will have agencies corresponding to the municipal level (MFFP) which will be the financing mechanisms for the local or regional productive projects, be they agricultural, forestry or of another type. The flexibility and the ease of access to resources should become the major characteristics of these municipal funds.

Aside from the tasks of financing, these funds will strengthen the local governments, support the consolidation of the grass-roots organizations and contribute to the defining and carrying out of activities for training in special skills.

The operation of the MFFPs will permit the definition of the differentiated activities for the various at-risk groups: rural women, ethnic groups, small entrepreneurs and producers, wage-earners and others.

The projects funded by this source should seek to complement the other activities financed by the other components of the MFFP.

The following lists examples of the possibilities of complementing the actions of the MFFPs with employment and food programs:

a. Links between the MFFP and the special programs

The rates of rural poverty reflect the urgent need to establish in the short term new alternatives to access to employment opportunity and family income in the rural sector. The fastest way to do this is to create a employment program financed by the central government and managed by the municipalities and the organized community. Similarly, there should also be food distribution programs, small business financing and support for rural women.

However, a clear distinction must be drawn between those actions that propose to maintain the population in the rural sector, from those that aim to prepare them for incorporation into the migration from the country to the city. It must be remembered that the cost of solving the problem of rural poverty is much lower than that of urban poverty; to the degree that if one achieves a decrease in emigrations towards the cities, one has decreased the cost of fighting urban poverty. Thus, on the operational level, financial resources are made available to strengthen organized participation of the civil society and of regional and local democracy; these works must be closely tied to the regional and municipal need for infrastructure, in order to change the productive and social scenario by means of the building of highways, bridges, schools, health centers, day-care centers, communal washing-places, etc. In addition, systems for irrigation, and protection, conservation and sustainable management of renewable natural resources and reforestation must be established.

b. Institutional structure of the MFFP

The MFFP should have an institutional structure that takes advantage of the technical and financial installed capacity, and in which is incorporated a simple and efficient work scheme at the regional and local levels. At both levels, opportunities should be explored to encourage and create mechanisms to permit ties between the regional and municipal governments, ensuring as well the effective and dynamic participation of the grass-roots organizations, the NGOs and the private sector organizations.

The fight against poverty as an instrument to achieve equity

The situation faced by the societies of the countries of the region today undoubtedly poses not only a gigantic challenge but also a invaluable opportunity to begin, in the process of fighting poverty, the construction of a new social and political order, and to advance the processes of economic growth, with a rational management of renewable natural resources; this must be brought about in a scenario in which, in the redefining of the traditional relationship between the State, the civil society and the market, national institutions and the international organizations join energies and make possible an equitable society.

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NOTES

- 1 These relationships are crucial given the growing importance of commercial accords between blocs of countries of which NAFTA and its possible outcomes are a good example. Few experts in international commerce would dare affirm that the new rules of the global market game will benefit all players equally. On the contrary, its impacts will affect not only the countries, but also the various social groups of consumers and producers differently.
- 2 In this context, an external agent is defined as an individual belonging to an organization responsible for the execution of activities of rural development.

2

Chapter

REDEFINITION OF THE INSTITUTIONAL FRAMEWORK

• Organizing for Change: People-Power and the Role of the Institutions

R. Sharp

• Intermediary NGOs: The Supporting Link in Grassroots Development

T. Carroll

• Service Delivery

T. Carroll

• Organizational Attributes of Strong Performers

T. Carroll

ORGANIZING FOR CHANGE: PEOPLE-POWER AND THE ROLE OF THE INSTITUTIONS

R. Sharp



INTRODUCTION

The nature and the scale of changes needed in all countries to achieve sustainable human development are increasingly well documented and understood. Many of these changes-political, technical and social-are spelled out in other chapters of this book. Critical to any chances of success in implementing them, however, is the complex chain of organizational mechanisms through which both the broad objectives and the specific planning targets must be articulated.

While they are in principle convergent, the pathways to sustainable development start from many points of the compass, often unconnected and mutually invisible. To be clear where they should take us, it is essential to understand the processes and the different levels of institutional machinery on which progress will depend.

This chapter therefore seeks to identify some criteria for a systems approach to sustainability. We ask what is meant by and what can be achieved through people's participation, how it grows out of democratic processes, how those processes in turn

depend on a strong and appropriate structure of institutions, and how those institutions grow from and are supported by a root system of human resources.

The questions we shall discuss here are (1) how participatory decision-making and representative institutions can best be established in countries of the South with very diverse political and social traditions, and (2) whether the current approaches of international agencies and donors are moving in the right direction. Some of the issues raised are not equally applicable to all regions; particular weight has been given to the situation of sub-Saharan Africa, bearing in mind the current wave of political change in that region and the concentration there of foreign advice and interventions. Many of these issues, nevertheless, are of relevance to people and institutions in all countries.

SUSTAINABLE DEVELOPMENT: THE PEOPLE'S ROLE

The concept of sustainable development embodies a belief that people should be able to alter and improve their lives in accordance with criteria which take account of the needs of others and which protect the planet and future generations. Thus people's rights and responsibilities form the crux of any discussion of sustainability.

People's movements in many countries have assumed the responsibility for challenging unsustainable systems or practices- the rape of tropical rainforests, industrial pollution, high-cost technologies for poor people or inequities in the distribution of wealth and resources. Where people have become aware of threats to their own or the world's future, these movements have accepted the responsibility of mobilizing to oppose them - sometimes even at the risk of their lives.

As for peoples rights, the commitment of governments and development agencies to 'popular participation' as a necessary ingredient of sustainable development has been enshrined in the Arusha Declaration on Popular Participation in Development (1990) and the Manila Declaration on People's Participation and Sustainable Development

(1989). in one sense, this assertion of the right to participation does no more than reiterate a citizen's entitlement as set forth in the Universal Declaration of Human Rights, adopted by the UN General Assembly in 1948. However, its progressive elevation to a place of prominence on the development agenda reflects two more empirical factors.

The most recent impetus has been the upsurge of public demands for democracy in many countries and the consequent demise of repressive regimes. Second, and over a longer period, a wealth of evidence has been accumulated that development projects designed and implemented without the full involvement of the intended beneficiaries have had a high rate of failure - and conversely, that projects planned with them from the outset, on an appropriate scale and using their skills and resources, have had a relatively high rate of success.

Aid agencies have drawn the lessons from this experience and sought to incorporate participatory principles into their projects. While this is undoubtedly an advance, it is not yet sufficient evidence that aid interventions are enabling the people they mobilize to engage in a genuinely sustainable process of self-improvement. Sometimes a project is described as 'sustainable' on the grounds simply of its survival beyond the phase of external support; but neither this, nor even its 'success' measured by limited project goals, necessarily implies true sustainability.

Over and above these factors, there are two more fundamental arguments for people now to be demanding their voice in the future. Both have to do with the physical limits to expansionism, which has historically been at the core of the human experiment and which has provided an escape-valve when pressures have threatened to explode a society's stability.

One is that humanity's room for spatial expansion, hitherto taken for granted, has come to an end. Among other things, this means that the poorest of the world's people, who could previously as a last resort distance themselves from the powerful minorities seeking to exploit them or their resources, now have nowhere left to go. They

must stand their ground or lose the struggle for survival, as the plight of indigenous peoples in many countries bleakly testifies.

The other argument concerns the limits of life support available from the biosphere. It challenges, on scientific grounds, the implicit assumption that development can mean a steady growth in material living standards for four-fifths of the world's people without curbing the consumption of the rest. While this analysis is not uncontested, its proponents insist that 'sustainable development must be development without growth - but with population control and wealth redistribution - if it is to be a serious attack on poverty' (Daly, 1991).

Faced with these actual or anticipated limits, many of those concerned to achieve sustainable management of our 'global village' have come to believe that democratic processes are essential for change, given that privileged minorities controlling power - nationally and internationally - will seldom if ever countenance the needed reforms.

The failure to institute such reforms up to now has left many governments in the South largely unaccountable for their actions, especially their massive accumulation of international debt, which is a principal reason for millions of people continuing to die of hunger and for the net flow of funds from South to North having reached US\$50 billion a year. And if the borrowers are to blame, where is the accountability of the Northern and international lending agencies, who have been accessories - wittingly or otherwise - to massive misappropriation of their funds? More effective people's participation is necessary at both ends of the North-South axis if the costs of adjustment to a sustainable society are to be equitably shared and not simply loaded on to those least able to bear the burden.

For all the benefits they can induce, however, participatory systems are not a panacea. Consultations among NGOs in advance of the 1992 UNCED have led to their identifying a list of five criteria for sustainable development: Who initiates? Who decides? Who participates? Who benefits? And who controls? A report on the consulta-

tions added: 'If the answer to all these questions is "the people", then projects can be assured of sustainability' (Ecoforum, 1991; emphasis added). This underlines an important distinction to be made between project-level participation - on a scale where direct democracy is often possible - and that in wider political fora, where the same cannot apply. Confusion frequently arises from use of the same term to mean different things (CWS and LWF, 1991). Participatory systems have up to now worked best at community or project level, where there are bonds of solidarity among the people and where, in the best cases, the five NGO criteria cited above can be met. But where they are introduced at a higher (for example, national) level to replace a rigid centralized authority, such systems - which are then necessarily representative, not direct - may unleash suppressed tensions and wreck the equilibrium previously maintained between rival social groups.

Whether at community or national level, for people to participate actively and without reward in public affairs costs them time and effort. In some cases it may well also entail financial or physical risk for those who find themselves in opposition to the majority. It is therefore not surprising if most people prefer to leave the business to others. Even in established democracies, the majority of citizens will only participate on a given issue when it directly affects their personal interests or seriously affronts their sense of justice. When we speak of participation, then, what we should mean is the opportunity to participate.

This, in turn, raises the awkward question of what conditions constitute adequate opportunity. Many of these are culture - or subject - specific, but the most obvious include:

- full access to information on policy issues and development plans;
- freedom of association to permit the discussion of issues by all interested groups within the community;
- regular meetings at which elected officials or the representatives of official agencies can receive and respond to the views

of the community and be held accountable for the actions taken on its behalf (Gran, 1983).

These conditions, it goes without saying, will need to be realized in a wide variety of institutional forms, allowing for the forms themselves to change.

In looking to the future, there is a temptation to seek scenarios that describe a stable-state sustainable society, not least in respect of the institutions which we believe would be necessary to maintain it. However, sustainable development cannot be a fixed destination; rather it is a process, as part of which our institutions and human resources can be moulded to meet the perceived priorities of the time. Those priorities will also change, depending partly on the extent to which they prove achievable and partly on the emergence of others which may seem more urgent.

In the end, the opportunity for people's participation in any society is determined by the quality of civil and political rights that they are accorded: in a word, political freedom. It is thus significant that the United Nations Development Programme's Human Development Report, in its initial work to construct an index of freedoms by country, detects a high correlation between human development and human freedom (UNDP, 1991).

PARTICIPATION AND EMPOWERMENT

When it is decided by the power brokers - usually governments or large donor agencies - that the people must be given a say in projects that affect them, their first step has often been to devise a process of consultation. The people are told what is to be done and their views are invited, but they are given no access to the decision-making process. When this is found inadequate, they are offered participation - a place, but often little real influence - in the policy-making or planning committees.

For the people to take charge of their own destiny, therefore, something more than participation is required. To encompass that

'something more', the development community has adopted the term empowerment.

Empowerment literally means the granting of power to an individual or group for a specified purpose. But where is this power supposed to come from? The usual assumption is that it has to be transferred from a controlling authority, which implies a zero-sum transaction. And since those who hold power are seldom ready to relinquish it, some commentators suggest that 'empowerment' may need to mean the struggle of the disadvantaged to achieve it (Hasan, 1991).

But there is also another kind of power that can be created where there was none before. This is empowerment through ideas, through education or, more specifically, through a process such as 'education for consciousness', the method developed and spread in the 1970s by the Brazilian educator Paulo Freire (Freire, 1970 and 1973). Here, empowerment is a positive-sum game, enabling people to understand not only why they are poor or disenfranchised but also what they can do about it - without waiting for concessions from authority.

This kind of empowerment is also frequently stimulated through participatory appraisal exercises at community level, giving villagers a clear sense of how they can improve their lives in practical ways. Much can be done to raise the consciousness of the poor and to help them understand the systems that restrict or oppress them, so that a confrontation with authority, if and when necessary, is more likely to yield benefits.

THE DEMOCRATIC IMPERATIVE

At the beginning of the 1990s, capitalist democracy appears to have emerged the victor from more than four decades of global confrontation with socialist central planning. Authoritarian regimes in many countries have suddenly found themselves facing a tidal wave of demands for civil liberties and a multi-party political system. A number have already gone under, and others seem certain to succumb. An era of rigid, autocratic governments in Eastern Europe,

much of Africa and other Third World countries appears to be coming to an end. Jubilant crowds in capitals from Bucharest to Bamako (Mali) have celebrated the demise of entrenched dictatorships.

Thus for many countries deprived of them hitherto, some measure of democracy and popular participation may now be on the way. But is it time yet to rejoice? As the nations of Eastern Europe have quickly discovered, freedom from tyranny is no panacea for social and economic ills. The lesson will be much harder for emerging democracies in the South, especially those in Africa with scant resources to manage the transition. Therefore, if participatory systems are an essential underpinning for sustainable development, an assessment of the prospects for progress must begin with a review of what participation-in-development has meant and accomplished up to now.

Democracy as a system of government has had a chequered history. Following its codification by the city-states of ancient Greece, government by the people was subsequently forgotten in Europe for the best part of 2,000 years, though it found expression in different forms in precolonial cultures as far apart as India and North America. From the sixteenth century and earlier, many Indian villages were self-sufficient and autonomous, governed by an unofficial council of elders and a number of village functionaries (Banuri, 1991).

When revived in a modified form in Europe and North America in the nineteenth and twentieth centuries, the democratic principles of the colonial powers were not generally extended to the governance of their territories in the Southern hemisphere. So when these colonies in Asia and Africa gained their political independence after the Second World War- nearly a century and a half after most of South America- many gravitated towards the alternative model of the socialist bloc, which at the time seemed to offer many social and political benefits.

By the mid-1970s, halfway through the United Nations' Second Development Decade, many leading development thinkers had become aware that the conventional strategies propounded up to that time were not addressing the real problems. In 1975 an international

team produced the outlines for what they called 'another development' - needs-oriented, endogenous, self-reliant, ecologically sound and based on structural transformations. For this kind of development, it was stressed, 'whether governments are enlightened or not, there is no substitute for the people's own, truly democratic organization' (Dag Hammarskjold Foundation, 1975).

In fact, for the next fifteen years, virtually until 1990, the international development community chose to turn a blind eye to the undemocratic nature of many governments in the South; indeed, the superpowers and some other Northern governments competed to support them for reasons of geopolitical or commercial interest. One result was that people's participation - and the development of indigenous institutions on which it depends - was in many countries conceivable only in the context of individual programmes or projects. Another was that independent groups embraced the idea of networking as a means of enabling people to participate in development planning and activities without being confined by the bureaucratic straitjacket of more formal institutions. National and international networks sprang up in many regions, providing an alternative institutional model for development promotion.

Over the past decade this commitment to participatory development has made significant progress, most notably in the practical work of non-governmental agencies and in methodologies devised by the more progressive research institutes. For many of the former it is now standard practice to try to involve the intended beneficiaries in the design, planning and management of projects, while the latter have developed a range of user-friendly techniques for participatory planning, such as farmer participatory research and rapid rural appraisal (RRA) (see e.g. McCracken, Pretty and Conway, 1988).

The hallmark of RRA is its reliance on simple techniques which can be understood and used by villagers themselves and which do not depend on literacy. They include the drawing of resource maps, seasonal calendars and diagrams to illustrate intra-village relationships, the ranking of people's priorities and preferences, and the use

of folklore, songs and poetry, which can reveal much about the community's history, values and customs. Use of these techniques has spread with remarkable speed over the past five years, and nowhere more dramatically than in India (Pretty and Sandbrook, 1991).

These techniques represent an important advance. A difficult question, however, concerns the extent to which participatory development projects will be tolerated - or can retain their integrity - within a non-participatory political system. There are many countries where such projects have thrived at community level even though the national government has been anti-democratic; examples include countries as diverse as Kenya, Pakistan and Indonesia. Participatory projects have spread not only in the rural areas, where the governments in question could perhaps afford to ignore them, but also in urban areas, taking up problems such as housing and health care, water and sanitation.

Many centralist governments have not stood in the way of small-scale participatory initiatives, but there is a variable borderline beyond which such projects will find themselves in conflict with the government's assertion of its prerogative in policy-making. The viability of local-level participation in the absence of a positive enabling environment can only be measured on a case-by-case basis, but it will depend significantly on the spread of similar initiatives (strength in numbers) and the level up to which participation is permitted in the pyramid of social organizations.

In government-to-government aid programmes, with some honourable exceptions, the approach to people's participation has generally been to add on a token consultation process. The affected populations are then invited to give their views on a project already decided and about which they usually have little information. Some donor agencies are now moving this consultative process up to the preliminary planning phase, so the people's views may be taken into account; but consultation (an interview, a questionnaire) is not participation. The World Bank recently produced detailed guidelines for its staff on how to involve NGOs and community organizations in

assessing the environmental impact of its projects (World Bank, 1991). The guidelines were presented as a recipe for the 'participation' of these groups; but while they reflected much thought and sensitivity on appropriate methods of consultation they stopped well short of suggesting any direct involvement for such groups in project decision-making.

WHO DEFINES DEMOCRACY?

In Africa, the 'lost decade' of the 1980s has been described as synonymous with the failure of the state, which in its current form 'has not managed to promote either development or popular participation' (ACORD, 1990). But the start of the 1990s has seen dramatic changes. Apart from the demise of nearly a dozen dictators, giving a new lease of life to the domino theory, potentially the most far-reaching change has been the decision of several major aid-giving nations to make their development assistance conditional on the recipient countries' progress towards democracy.

This new conditionality has been made possible by the end of the cold war, removing much of the rationale for shoring up unconstitutional client regimes. Whether or not such political conditionality is considered to infringe a country's sovereignty, the pragmatic question is what kind of democracy it demands. Will the conditions imposed by the aid-givers really promote the empowerment of the people? Will they provide a basis for more just and efficient government? The omens so far are not altogether encouraging.

To put first things first, there is now an authentic democratic groundswell of public opinion in many of the countries of the South themselves. For much of Africa, in particular, this opens up radical possibilities of renewal from within: the first chance, it could be argued, for the people of that region to redefine the parameters of their political organization since the pre-colonial era.

This process of renewal already has its own dynamic, independent of external pressures which may seek to reinforce it. These pres-

asures may be helpful, where their purpose is to open up the range of available options. A measure of conditionality attached to human rights, for example, may be needed to deter governments from using political repression to protect themselves from the consequences of economic liberalization .

But pressure by Northern donors may equally prove counterproductive if they attempt to go beyond this to prescribe specific solutions, and this is what is happening at the present time. Furthermore, as commentators in the United States have noted, there is an assumption - central to the discussions of democratization among Northern policy-makers - that democracy and a free market are structurally linked (CAWS and LWR, 1991). This again poses the question: are we all talking about the same thing?

For policy-makers brought up under a Western parliamentary form of government, the need for more than one political party to provide the checks and balances of a democratic system appears self-evident. Though the semblance is often greater than the reality, it seems to be the essential ingredient for public choice. As such, some Northern development agencies have adopted an almost evangelical fervour in urging multi-party democracy upon Southern countries looking for a new way forward. One is reminded of the words of Aldous Huxley more than sixty years ago when he observed: 'For vast numbers of people the idea of democracy has become a religious idea, which it is a duty to try to carry into practice in all circumstances, regardless of the practical requirements of each particular case.'

In the context of Africa today, one knowledgeable observer notes that 'blanket demands for the rapid introduction of multi-party systems along Western lines do not always do justice to the complexity of the situation' (Hofmeier, 1991). That complexity includes several sociopolitical factors which differentiate the African from the Western reality. In particular, there is the risk of ethnic and/or religious antagonisms being manipulated and sharpened by the creation of competing political parties. Although various African leaders have found it convenient to invoke this as a justification of one-party rule, the dan-

ger of factional conflict is in many cases real - as, for example, in the case of Mali, where the overthrow of dictatorship has led to the creation of more than forty political parties and aggravated hostility between the majority Bambara and the nomadic Tuareg of the north.

Quite apart from such inherent obstacles to political transformation, there is evidence that external pressures which stress form (e.g. multipartyism) rather than substance make it fairly easy for autocratic rulers to construct a deceptive facade of democracy to satisfy them. Free elections present no problem; gerrymandering can ensure the desired result. Decentralization is easy; power is devolved to those who will do what they are told. And as Julius Nyerere has noted, corrupt governments can fearlessly assign their friends as puppeteers to run pseudo-independent political parties. In short, the forms of democratic practice are easily fudged. Even a genuine commitment to multi-party politics may only have the effect of segmenting the existing ruling class. Without a range of other measures, there is no guarantee that it will do anything to empower the people as a whole.

A further thorny question for those carrying the banner of sustainable development is whether governments introducing democratic systems will be more or less able to commit themselves to the kind of long-term development strategies their countries need. As in the West, short-term electoral opportunism can be expected to come to the fore, offsetting in varying degrees the gains of a more open and participatory system. With a time horizon of five years or less, elected governments face the inexorable logic that jam today will buy more votes than ovens for bread tomorrow. The nation's long-term economic health and the rights of future generations are not seen as the issues for a winning political manifesto.

The conclusion may be drawn that while sustainable development requires a participatory political process, the imposition of unfamiliar democratic forms without the necessary checks and balances in place is liable to prove socially divisive and counter-productive. What is needed, then, from the external Supporters of political renewal in the South is less emphasis on form and more thoughtful

attention to substance - that is, practical efforts to lay the groundwork for a pluralist society. As one distinguished African commentator has noted: 'The needed transformation in the political process goes beyond multipartyism or concessions granted by the government. It is necessary to Strengthen civil society at all levels including peasants, workers and student movements, NGOs, professional associations, academic groups, etc.' (Damiba, 1991).

A first appropriate step for external agencies in this process would be a constant and thorough monitoring of the observance of human rights. Related areas of attention should cover many different freedoms and institutions, such as the maintenance of the rule of law, the compulsory accountability of government bodies the prevention of uncontrolled nepotism and other patronage, permission of a true pluralism of ideas, the unimpeded existence of different associations, interest groups and a free press, and finally as much separation as possible between parties (or the party) and the state or between the political and economic spheres.(Hofmeier, 1991)

To these could be added a campaign of public information and education, needed in many countries to raise people's awareness of the implications of an evolving democratic process and to give them the basic conceptual tools for participation.

Along with the new donor commitment to democracy in development has come a critical spotlight on the structure and efficiency of institutions in the developing world which are needed to support it. This debate on 'good governance' was initiated by the World Bank in its long-term perspective study of sub-Saharan Africa (World Bank, 1989). While provoking controversy - and with good reason - it has done much to generate awareness that the best-laid plans for sustainable development will go nowhere without adequate institutional mechanisms to formulate policies and implement them.

At one level, the World Bank's concerns can be seen to focus primarily on the efficiency of economic management. In its long-term study emphasis is placed on the need for a 'leaner, better disciplined, better trained and more motivated public service', public enterprises

with managerial autonomy and monitorable performance indicators, and a greater role for local government. At another level, however, behind the assertion that 'better governance requires political renewal', the Bank's analysis is seen by some critics as highly ideological, suggesting that Western liberal democracy is the only path to development.

Put simply, an equation can be formulated to show that good governance = good decision-makers + good decisions + good implementation. And few would argue with the Bank's general contention that the requirements include the rule of law, public accountability and the free flow of information. But beyond this, critics detect a tendency to write one blanket prescription for all Countries - the same failure to disaggregate according to national and local conditions which they consider a principal flaw of the structural adjustment programmes of the 1980s.

So far the debate on governance has raised more questions than it has answered. For instance, harsh economic reforms demanded by the International Monetary Fund (IMF) and the World Bank in Africa have been more easily and effectively undertaken by authoritarian regimes, which have frequently imposed even more stringent controls to push the policies through. Furthermore, the budget cuts introduced with these reforms have often resulted in near-impossible working conditions in government, leading to a 'brain drain' and yet lower performance by the very institutions on which the eventual outcome of the reforms depends. And Northern agencies have so far failed to come forward with offers of special help for governments prepared to initiate democratic reforms in difficult economic conditions.

ORGANIZATIONAL FRAMEWORKS

On the basis of the foregoing analysis, we should now look at the organizational framework or structures which are needed if sustainable development policies are to work in practice. There are two fundamental questions to be asked about the direction of institutional change in the context of sustainability:

- What kind of democratic processes and machinery are necessary to unshackle the productive energies of the Third World populations and to convince them that new efforts will be for their own benefit?
- What are the conditions required to make such processes work?

What processes?

People's participation is a multiform and dynamic process; it is not something that can be instituted simply by legislation, even though this will in most cases be a necessary condition. To have democratic rights on paper in no way guarantees the ability to exercise them. The process is multiform in the sense that it cannot be initiated from a single starting point and achieved by a linear progression. An NGO in Borneo, Burundi or Brazil may want to operate in a participatory manner, but it will be blocked at the start if its project beneficiaries at community level are subject to cultural, political or economic domination by traditional chiefs, politicians or merchants - or if the central government denies the NGO access to information and refuses collaboration with its own extension services. Based on a case study from Peru, one analysis of citizen participation emphasizes that it must be understood in the context of political and governmental institutions which are complex and shifting, in which strange alliances abound and in which the motives to participate are conflicting (Peattie, 1990). Despite the complexities, democratic processes for sustainable development must start from where the people are, in terms of both place and socio-cultural environment. That this basic condition remains a dead letter in many parts of the world (and is broken by a good number of the model Western democracies) can be attributed essentially to two factors:

- over-concentration of political, commercial or social power in the hands of small minorities; and
- the resultant giantism of centralized institutions and top-heavy bureaucracies unable to respond either to needs or to opportunities.

However, cracks have recently been appearing in many of the monolithic national structures that control people's development in the South. Some interpret them as signs of a global trend towards decentralization and people power: perhaps even the 'paradigm shift' for which some of the more progressive development thinkers have long been scanning the horizon.

Decentralization is said to be an idea whose time has come (Banuri, 1991). But how widespread is the empirical evidence for change in this direction? Without doubt, the strongest single impulse during the 1980s was provided by the structural adjustment programmes requiring many Southern governments to cut back social services and to divest themselves of unprofitable enterprises. Some cuts left a vacuum; others led to a delegation of responsibilities to provincial and local levels of government but gave them little room to be more than executing agencies for the centre. Very few provided for a real transfer of power to the local agencies best placed to fill the gap, whether governmental or other.

Meanwhile, as illustrated by many examples in the present volume, a mass of evidence has been accumulated to show that decentralized development schemes are almost invariably those with the best track record. In most cases, though, these are schemes initiated at community or project level, and there is still little conclusive evidence that power relinquished by central governments will percolate to the grass roots.

Advocates of decentralization also have to overcome a number of objections from different quarters - for example, that it may encourage anarchy, that coordination between agencies and the enforcement of rules or laws will be more difficult, and that the rights of individuals or smaller groups will be hard to protect (*ibid.*). These are not concerns to be minimized, but assuming they can be satisfactorily resolved, action will be needed at various levels to promote a decentralized development model. More research is needed to define appropriate policies for international agencies and national govern-

ments. Better training is required for extension workers to develop strategies and programmes with the people, and for officials at national, intermediate and local levels to prepare and engage them in new ways of working and new inter-level relationships.

One important consequence of a shift in rights and responsibilities from central government to the local level should be an improvement in the management of resources - human, physical and financial. But for the system to work in this way, a local community must be able to obtain decision-making power over its own affairs. In other words, there must be an enabling environment - in particular, a framework of law and an organizational infrastructure through which representative bodies at community level can inform themselves on issues of the day and then transmit their views or decisions both to other communities and to the higher authorities.

For this infrastructure to be effective, three essential requirements must be borne in mind:

- transparency, which means that the processes of decision-making must be open to public view and thus be seen to be free of interference from special interests;
- accountability, not only in the financial sense to guard against the poor management or misappropriation of funds, but also politically to ensure that agreed policies and programmes are carried through; and
- freedom of information, which requires independence for the press and other news media so that the people's right to participate in public affairs is backed up by the right to know.

What conditions?

To make the necessary provision for these rights and responsibilities, governments must demonstrate their commitment to popular participation on a number of fronts:

- by establishing a proper legislative framework to give their commitment the force of law and by strengthening the integrity and powers of the judiciary in whatever ways are required to ensure compliance;
- by issuing instructions to public agencies and employees to ensure that legislation is respected, by providing any resources needed to reform existing institutions and practices, and by monitoring progress and publishing regular reports to highlight areas of success and/ or difficulty;
- by providing education and skills training at the community, district and provincial levels to produce an adequate cadre of trained and well-motivated people who will understand the values of, and be competent to manage, a participatory system.

The term 'multi-partyism' is often used to imply that a political system which freely allows the establishment of political parties will, by definition, be democratic. This is a dangerous over-simplification. A multi-party system provides better protection for freedom of the individual, but it is not in itself enough. Just as important are the strength, orientation and credibility of the organizations which stand between the ordinary citizen and the state: the village committee, the rural workers' association, the schoolteachers' union, the handicrafts co-operative, the federation of women's groups, the national NGO consortium and many more.

It goes without saying that if these intermediate organizations are weak they will be poorly placed to represent the interests of those they speak for in any participatory system; indeed, for their constituents the system will not function. They must be strong in order to command credibility with their members/supporters and also with the higher organs of government that they deal with.

A good example is the NGO consortium of Zimbabwe, VOICE, which grew out of a pre-independence welfare organization and until recently experienced declining support among its members.

Many felt that VOICE was unable to represent their interests effectively and that this restricted their scope for participation in development policy issues at national level. Under a recent restructuring and with a new name the National Association of NGOs (NANGO) - the consortium has adopted a new constitution and a decentralized management structure, providing for more effective involvement of its members at all levels. A renewed sense of optimism and commitment is already evident.

Even with far greater human and technical resources, many social institutions considered to be the backbone of democracy in the North fail to meet the criteria of real participation. In countries of the South newly embarking on a democratic course, few of the preconditions exist for participation at the national level; there may nevertheless be room to build on traditional forms of collective decision-making at community level, which have the advantage of being established and well understood.

THE ROLE OF INSTITUTIONS

People in the environment/development business are good at inventing the kind of magic passwords - such as 'participatory appraisal', 'good governance' and 'sustainability' itself - which punctuate this chapter. Though reality lags behind, they give us a comforting sense of being on the right track. But what is needed to achieve the kind of harmonious balance implied by this occult vocabulary?

First and foremost, most analysts agree, is the need for effective machinery to carry and convert the sustainable development model from theory to practice. In simple terms, what is required is an interlocking network of institutions capable of acting as a power grid to harness and distribute a nation's human energy. Without such a matrix to articulate and give coherence to people's aspirations and efforts, no development can be built to last.

Scarcely more than a generation ago, India epitomized the misery of the Third World with widespread hunger and seemingly irre-

versible poverty. Today, more than 300 million Indians are still extremely poor, but the country has become the world's eighth largest industrial power, due in significant measure to its highly developed organizational infrastructure, which includes, from village Level upwards, several thousand non-governmental groups active in every field of social and economic concern.

In other countries, however, and most notably in Africa, the development of formal institutions has until recently been confined to organs of central government and the ruling party. In the past, institution-building projects in the South by large aid agencies have also frequently been too short in duration and too narrow in their objectives.

A World Bank publication, acknowledging that institutional development is a slow process, says that the Bank's most successful attempts have been over long periods, 'usually several decades'. Institutional projects, which at first concentrated on only one or two issues, were found not to work very well; however, even when introduced into integrated rural or urban programmes they have still tended to produce poor results. Significantly, the most progress has been made in sectors of 'high specificity' - such as finance, industry and advance technology, where standards and performance can be measured with precision - and the least in social or 'people-oriented' activities such as rural development and health care (Israel, 1987).

This account of the World Bank's experience starts from a rather narrow definition of institutional development as being 'the process of improving the ability of institutions to make affective use of the human and financial resources available'. Arguably it should have the more fundamental purpose of evaluating the relevance of institutions - both severally and in relation to others - in addressing economic or social needs. Only with such terms of reference will institutions be identified which have outlived their purpose or which, perhaps, had doubtful reasons to exist in the first place. The point is important because institutions are not a neutral factor in the development process; they represent values, which in turn represent the interests of some political or social group. As a consequence they

can be highly exploitative. One school of thought maintains that in today's institutionalized society, health, learning, dignity, independence and creative endeavour are defined as little more than the performance of the institutions which claim to serve these ends (Illich, 1970).

In seeking to strengthen the institutional base for sustainable development, therefore, care must first be taken to ensure that the values are right and that both the scale and the orientation of any institution are appropriate. Only then is it time to address the technical questions about effective use of resources - and here again it must be remembered that the transfer of scientific, technical or managerial expertise to a given organization will not be enough to enhance its performance if constraints on its operation (upstream) or its outputs (downstream) remain unchanged.

So how should we visualize the kinds of institution that will support sustainable patterns of development?

THE MICRO LEVEL

At community level, a viable institution will be one that represents people's ideas, interests and/or needs, which has their confidence and the power to communicate their views effectively in dealings with higher authorities. This presupposes a degree of decentralization of decision-making, and it assumes a capacity of both leaders and members of the community to take advantage of their rights. It requires that local institutions have access to information about national development and resource-use policies, plus the skills to interpret this information in order to formulate realistically their own expectations.

Local organizations must be the bedrock of any participatory development process. As well as giving people some say in the policy decisions that affect them, they can mobilize local resources, give better representation to women and adapt externally designed programmes to local conditions. Whether urban or rural, formal or infor-

mal, local organizations are among the most important and active in shaping their environment and can be crucial for sustainable resource use (Pretty and Sandbrook, 1991).

What, then, is needed to promote the development of institutions at the micro level and to facilitate their work? Before anything else, the right to organize. On this point one commentator has stressed that for the people to be empowered, the people must be 'created' through institutions or collective organization. Others cite needs for cooperation with government agencies and technical assistance, while a study of housing and health in Third World cities lists four conditions for promoting community participation: representative governments at all levels; local government support; the adoption of a more community-based approach by government programmes; and the introduction of 'community facilitators' to liaise with the government and other agencies.

THE MESO LEVEL

At the intermediate levels of social, economic and political organization - that wide stratum sandwiched between government and the grass roots - a more complex mix of technical, managerial and information handling skills is needed to make the institutional machinery effective. In between the macro and the micro, this meso level of institutions includes provincial and district authorities, co-operatives, research and training institutes, the small-scale private sector, trade unions, religious groups and a range of independent, non-profit organizations. For this sector to function effectively in the national interest, it must cultivate the ability to face both ways: to interpret the grass roots to the center and vice versa. This role is well established in certain countries of the South, but it is something new in those where the transmission of power has hitherto been unidirectional. It therefore calls for many new skills on the part of those who should provide a key interface between policy-makers and the mass of the people.

Three important elements in the meso-level infrastructure are federations of community groups and local government, both of which may straddle the micro-meso line, and NGOs. National and provincial federations of poor farmers or community organizations have developed in many countries. They range from the *Fédération des Groupements Naam*, supporting as many as 200,000 peasant members in Burkina Faso, to the National Co-ordinating Body of Mexico's Urban Popular Movement (CONAMUP), an umbrella for dozens of urban groups throughout the country. Such federations can have a key role in mobilizing and sharing resources available within the movement, as well as providing an effective front for interaction and negotiation with government and external research or aid agencies (Bebbington, 1991).

A recurrent message of this book is that sustainable practices require a transfer of power and responsibility from central government to the local level. Given the importance that this attaches to the functions of local government, much will need to be done before most city, town and village administrations in the South are equipped for the task.

As pointed out earlier, decentralization has most often meant increased responsibilities for local government without any increase in its already inadequate financial resources or decision-making authority. In most urban centres, government already has no more than a minor role in housing construction, water supply, road building or other basic services - and in worst-case situations local government can have a negative influence, repressing community organizations and favouring investments that benefit a small elite (see Chapter 5).

Improving the quality and resources of local government should thus be a priority in any sustainable development strategy. Quality means that such authorities must be elected and accountable to the community, having well-defined powers commensurate with their responsibility for community affairs. To ensure an adequate degree of autonomy, local governments must also have access to independent

sources of revenue - something that many national governments, and not only those in the South, do their best to resist.

Across most countries of Latin America, Asia and Africa, NGOs - either foreign or indigenous - have over the past two decades become principal actors in development at the meso level. At best they have proved more flexible, more innovative and more ready to introduce participatory approaches than official organizations. They have also successfully challenged many large-scale official development schemes which threatened the rights or resources of the poor.

For this reason NGOs are regarded with ambivalence if not suspicion by many governments. Given their control of substantial Northern funds, governments have been obliged to recognize them as partners in the development process. But for this partnership to have real meaning, NGOs and other organizations representing the people's interests must gain access to the policy-making process. In practice, they will only be accorded a meaningful role in policy formulation when they are able to demonstrate a thorough understanding of the technical and political constraints prevailing in any given sector. Even if nominally granted, access to the policy arena will be meaningless for people's organizations unless they are equipped to take advantage of it.

The policy role of Southern NGOs is actually or potentially one of their most important functions. This has been demonstrated in the past ten years by numerous groups in Asia and Latin America, which have formed networks and coalitions to campaign on issues of concern to their constituencies. In Africa, however, only a tiny handful of non-governmental groups have so far been able to develop anything like a policy platform. Some are now making new efforts in this direction, beginning with the skills required to underpin policy formulation.

Much more cross-fertilization and networking between meso-level institutions is needed to develop the consensus on strategies which must support participatory development goals. Among other things it demands a good degree of institutional flexibility, as noted in Chapter 4.

THE MACRO LEVEL

For a number of national governments, the last decade of the twentieth century has begun with a profound - and in some cases traumatic - reappraisal of the role of the state. The dismantling of the public sector in many Third World countries during the 1980s, under pressure from the IMF, was presented as an objective economic necessity. However, the institutional restructuring which this divestiture will entail for many countries of the South in the 1990's is being tied to an overtly political agenda. Some of this - the emphasis on democratic systems and people's participation - should help to cement the foundations for sustainable development. But there is a real danger that the demise of autocratic regimes will be taken as evidence that the South now needs carbon copies of Western institutions to make democracy work. The already evident tendency of some donor countries to equate democracy with multi-party politics and free-market principles is a case in point.

The institutions of government in low-income countries vary so widely in both scope and quality that it is impossible to generalize about their needs. Some have efficient and well-staffed ministries working on clearly defined policies to promote sustainable development as far as their means allow. Others have little or no effective infrastructure and, in the case of the poorest countries of sub-Saharan Africa, few human resources or other means to start building it.

What can be said is that most countries should be seeking to strengthen their capacities in policy-making and in socioeconomic and technical research, with three objectives in view:

- to enhance their economic independence by acquiring greater negotiating parity with Northern agencies on finance, aid and trade;
- to upgrade national research inputs to policy-making, thus reducing their dependence on external advice which can seldom take full account of the critical indigenous factors of cultural and social relations;

- to facilitate the process of institutional restructuring below government level by assisting in the identification of mechanisms and linkages required between the macro, meso and micro levels.

INSTITUTIONS IN THE NORTH

In countries of the North, meanwhile, a crescendo of voices urging environmental protection and 'green' policies has brought a rapid growth of institutions committed to sustainable development over the past decade. Governments have set up new ministries of the environment and campaigns by non-governmental agencies have mobilized wide public support on many issues.

But popular support for sustainable development tends to stop short of policy areas where people perceive their own interests to be at stake. This means there is little or no public pressure for changes in international terms of trade or in resource-intensive consumerist lifestyles. To deal with these issues, Northern countries need more independent organizations able to analyse the costs and benefits of various policy options.

Internationally, much attention has been given in recent times to ways of reforming the institutions of global governance: the United Nations system, the World Bank and the IMF. In April 1991, a meeting of thirty world leaders convened in Stockholm by the Swedish Prime Minister, Ingvar Carlsson, concluded that the United Nations 'is today not strong enough to deal with the tasks that face it... needs to be modernized and its organization updated'. In particular, their statement said, the UN needed to be able to handle the security dimension of economic and ecological issues at the Security Council level. Pointing out that the IMF and World Bank had expanded their activities beyond those originally intended, the meeting called for a world summit on global governance to review these and related issues.

HUMAN RESOURCES

To achieve sustainable development, people must be able to participate in decisions that affect their lives. To provide for this partici-

pation requires a democratic political process with effective and accountable institutions at all levels. And institutions, to be effective, must be able to count on a supply of competent, well-motivated people to run them.

For countries of the South, therefore, the path to a sustainable future has to start with programmes of human resource development. Many in Asia and Latin America are already some way down this road; other countries - including most of Africa - have made little progress in recent years, and not a few are losing ground. The World Bank's long-term study of sub-Saharan Africa (World Bank, 1989) judged the quality of primary and secondary education in the region to be 'low and declining', while higher education revealed an inappropriate mix of outputs, overproduction of poor-quality graduates and high costs.

At one end of the educational spectrum, learning to read and write can empower the poor by enabling them to gain greater awareness of circumstances and changes that could improve their lives. At the other, Southern nations need highly trained specialists for policy-making, research, planning and management. In some countries, unbalanced spending on higher education has produced a surfeit of graduates in certain fields and a shortfall in others. Shortages of trained personnel have been exacerbated by the continuing 'brain drain' of talent to the North, in some cases to jobs for the very aid agencies which affect to deplore it. There are estimated to be well over 100,000 trained Africans currently living in Europe and North America.

Setting out a strategic agenda for Africa in the 1990s, the World Bank suggested that, whatever the political vantage-points of different governments or organizations, there was 'broad understanding, in particular, on the absolute priority to be given to human resource and institutional development' (World Bank, 1989). This is where any sustainable development must have its roots.

CONCLUSIONS

From this review of the structural elements of sustainability, two kinds of conclusion can be drawn: those of principle (what ought to be done, as change allows), and those of pragmatism (what can and cannot be done within existing constraints). But there is no fixed boundary between them. What is a distant ideal for one country may already be the accepted wisdom in another; what was unthinkable last year may be within reach today. Hence it would be invidious to attempt a demarcation between the two categories.

This chapter has sought to show that organizing for change towards a sustainable global future hinges on the rights and responsibilities of people to participate in the decisions that affect their lives and those of future generations. It also demands the equitable sharing, North and South, of the costs of adjustment to a sustainable society.

To enable their people to exercise the right of participation, governments must guarantee civil and political rights including freedom of association, an independent judiciary and freedom of information. Participation can then lead to real empowerment through the provision of appropriate education, awareness raising and skills training to overcome the inequities perpetuated by the exclusion of the majority from the shaping of their own development.

Progress towards these goals presupposes the existence of or scope for democratic processes from the village to the global level. But these processes will be diverse; they cannot and must not be expected to conform to a particular model. International agencies and Northern governments need to exercise caution in attaching political conditions to aid programmes. There are severe limits on the extent to which a market-led economy can propel democracy in poor countries with few resources to manage the transition. Emphasis must be placed on the substance rather than the form of progress towards a pluralist society.

To manage change, it is suggested, requires in any country an interlocking network of institutions capable of acting as a power grid to harness and distribute a nation's energy. Much of the recent attention given to institutional development has focused on organizational efficiency. But institutions are not a neutral factor in development; often they are exploitative of the poor. More fundamental than their efficiency, some of the questions needing to be addressed concern the scale, orientation, relevance and values of institutions in relation to economic or social needs. At each level of organization (micro, meso and macro), enabling measures are required to help institutions fulfil their role. As a particular example, support for sustainable development calls for more coherent efforts - especially but not exclusively in the South - to strengthen the quality, representativeness and resources of local government.

Finally, as is now increasingly recognized, the precondition for any sustainable future lies in the mobilization of human resources to plan and manage it. A country's priorities for human resource development need to be assessed (or reassessed) not only according to the requirements of a given sector or institution but in light of the wider issues of sustainability.

Given the chance, we may conclude, people can make direct democracy work powerfully in favour of sustainable development. The more intractable problem is that of scaling up. Above the small-group or community level, systems of representative democracy have to reconcile many complex and conflicting pressures. They can only be expected to contribute to the goal of sustainability where social divisions are manageable and where there is a broad consensus on the ecological, economic and ethical criteria for a secure future. These three criteria - the ecological, the economic and the ethical - must be the measure of any organization for change in the twenty-first century.

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INTERMEDIARY NGOs: THE SUPPORTING LINK IN GRASSROOTS DEVELOPMENT

T. F. Carroll



Tending the Grassroots: GSOs and MSOs

The overall purpose of this book is to examine the common or recurring organizational features and development strategies of intermediary-type nongovernmental organizations (NGOs) to ascertain which approaches and institutional configurations appear to be associated with good performance and to suggest how donor agencies can enhance these desirable elements.

The term intermediary is not felicitous in Latin America. Although intermediation is one of the key functions of certain NGOs, the term evokes a negative perception of their role (akin to "exploitative middlemen"), especially in Spanish or Portuguese. In addition, leaders and members of this important subgroup of NGOs object to being labeled intermediaries. Albert Hirschman, who reviewed a selection of InterAmerican Foundation (IAF) projects in 1983, also dislikes the terms intermediary, facilitator, and broker. He suggests a substitute organizations involved in social activism (Hirschman 1984). His alternative vividly imparts the

sense of social commitment that characterizes most of these organizations, but it does not convey anything about their relationship to the local level, which is their distinguishing characteristic. To rectify this situation, this book re-christens these NGOs as grassroots support organizations (GSOs) and membership support organizations (MSOs).

Terms and Definitions

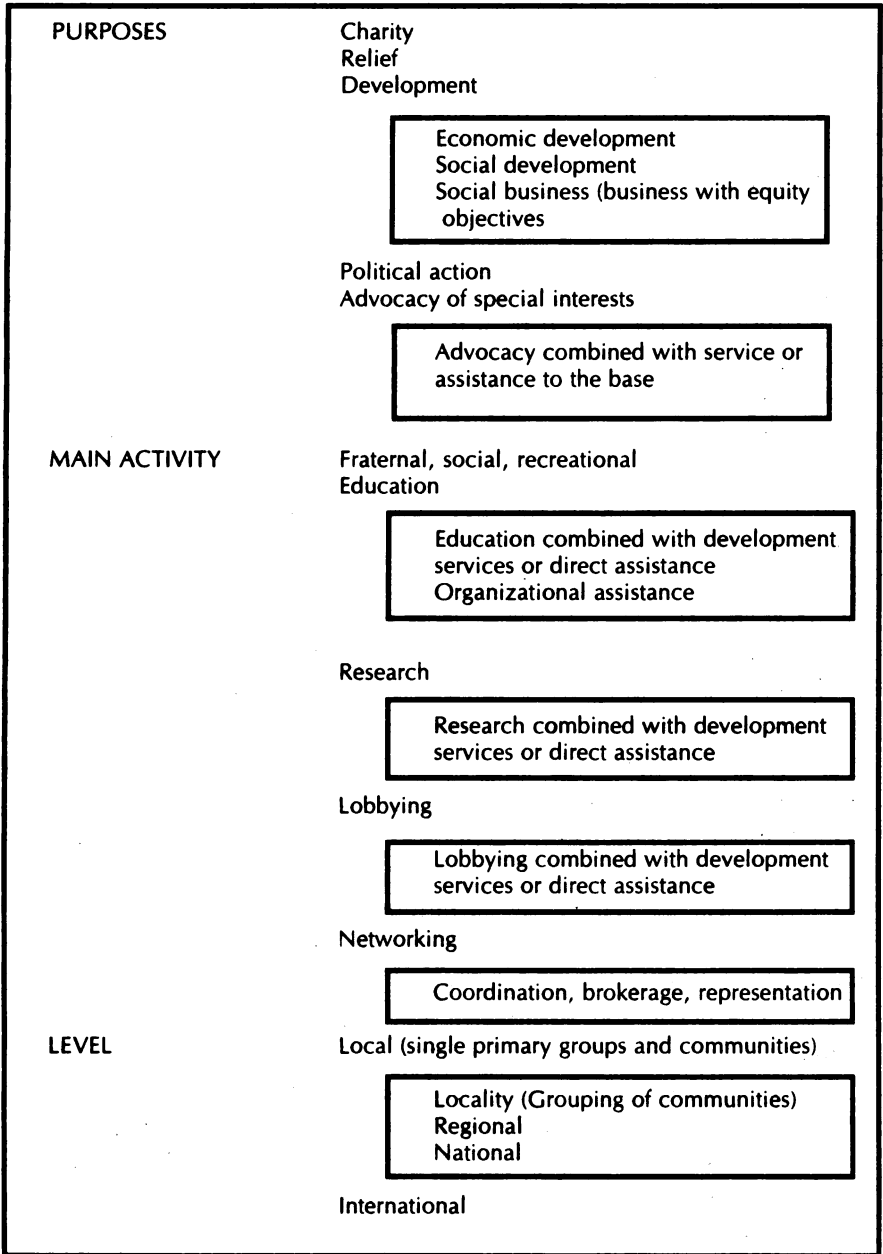
GSOs and MSOs are two subsets of the broad spectrum of NGOs. The term NGO covers hundreds of types of organizations within civil society, ranging from political action committees to sports clubs. Only those NGOs with specific developmental purposes and main activities and that operate on a certain level are classed as GSOs or MSOs, as shown in Figure 1.1.

In general terms, GSOs and MSOs may be defined as developmental NGOs involved directly in grassroots work. Accordingly, research organizations or educational institutions without outreach or action features will be called GSOs or MSOs. The following paragraphs expand on these basic definitions.

GSO. A GSO is a civic developmental entity that provides services allied support to local groups of disadvantaged rural or urban households and individuals. In its capacity as an intermediary institution, a GSO forges links between the beneficiaries and the often remote levels of government, donor, and financial institutions. It may also provide services indirectly to other organizations that support the poor or perform coordinating or networking functions.

MSO. An MSO has similar attributes. It also provides service and linkages to local groups. However, an MSO represents and is accountable to its base membership, at least in principle. For example, a primary or base-level membership organization is a local cooperative or labor union. A regional association of such base groups is a secondary, or second-level, group. This is sometimes capped by a third-level national federation. It is these second and third-level membership organizations that are referred to as MSOs here.

Figure 1.1. Identification of GSOs and MSOs within the Spectrum of NGOs



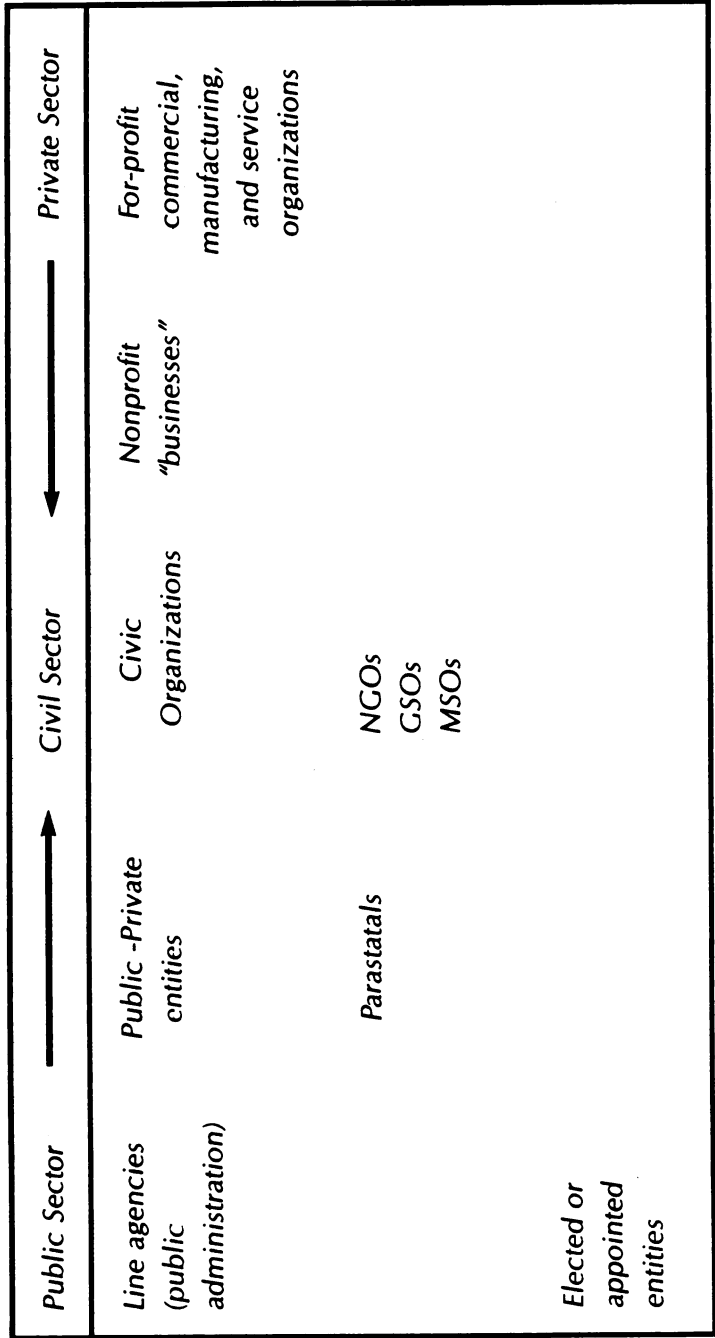
Primary grassroots organizations. Both GSOs and MSOs are distinguished from primary grassroots organizations by scope, level, complexity, and function. A primary group is the smallest aggregation of individuals or households that regularly engage in some joint development activity as an expression of collective interest. GSOs and MSOs tend to serve, represent, and work with several primary groups. In other words, they operate on the next level above the primary grassroots organizations and seek to assist and support them.

Some of the words used in these definitions merit comment. The concept of local is sometimes ambiguous. Uphoff (1986) includes three types of collective action units under his definition of local institutions: (1) the group level (a self-identified set of persons having some common interest), (2) the community level (a relatively self-contained socioeconomic residential unit), and (3) the locality level (a set of communities having cooperative and commercial relations). This book considers only the first two, the group and the community, as local or primary. The third is already an aggregation of base groups and is therefore considered within the GSO/MSO category.

Unlike international NGOs based in developed countries, GSOs and MSOs are national in that they operate within the institutional framework of developing countries. However, sometimes the boundary is blurred, as when expatriates support GSOs or MSOs that operate under local legislation, have local staffs, and are financially and legally independent from their sponsoring or affiliated institutions.

Figure 1.2 delineates the continuum of public-private institutions. One of the first tasks in carrying out this study was to sort out the various types of entities working in grassroots development programs. The two extremes—government line agencies and private, profit-making firms—are excluded from consideration here, although in many parts of the world, state or business organizations also have a role in grassroots programs. The GSOs and MSOs examined here fall in the middle area, or the civil sector, in the figure. This sector has been defined as “neither private in the sense of the market, nor public, in the sense of the state” (Wolfe 1991).

Figure 1.2. The Public-Private Organizational Continuum



The expression development oriented when used to define GSOs and MSOs, is meant to provide a contrast to charity or relief, which were the traditional functions of private and religious agencies and continue to be important in the world of international private voluntary organizations. Charity and relief stress distribution without reciprocity; development aid stresses some contribution from the recipient and aims at growth and capacity building, resulting in an eventually self-sustainable process. In development aid, capacity building is central, as it is in this book. The word support is meant to convey a sympathetic form of assistance close to the concept of tending, which implies not simply giving but a mutually respectful reciprocity between the supporter and the supported.

GSOs may be distinguished from MSOs on the basis of ownership and control. A GSO is a promotional and service organization whose beneficiaries are not members; an MSO is a federation, union, or association of primary groups in which the members are stakeholders. GSOs are sometimes called "outsiders" and MSOs "insiders."

Outsiders, or GSOs, are primarily facilitator organizations whose management is made up of professional middle- or upper-class individuals or, generally, individuals whose social status is not the same as that of the beneficiaries with whom they work. GSOs are not controlled by or accountable to these beneficiaries, although some beneficiaries may function as board members or advisers.

Insiders, or MSOs, are more typically extensions of the base groups themselves.

Their leaders come from the same social classes as the manufacturing, and service organizations members, and accountability mechanisms such as elected representation are built in. GSOs independently advocate and lobby for social causes, and MSOs practice representational advocacy on behalf of specific constituencies.

The distinction between a GSO and an MSO is less sharp in practice than in theory. In later chapters, some of the differences in their

operational styles are discussed. As will be seen, the two types interact and sometimes even overlap in practice.

During the study, controversy surfaced, both within the IAF and in the field, about whether cooperatives and other membership associations should be included in a study of intermediary organizations. Membership control is qualitatively significant, especially in terms of accountability, and institutions created by the local groups themselves have greater claims to continuity and legitimacy. However, second- and third-level membership organizations operating as MSOs serve as intermediaries between donors or governments and their base units and constituencies. They thus work above the grassroots level, even though they are upward extensions of grassroots organizations and, at least in principle, represent and are accountable to their base membership.

Typology: The ABCs of GSOs and MSOs

The universe of GSOs and MSOs is highly varied and complex. For analytical and comparative purposes, a classification system based on four characteristics has been developed: (1) scope and level of operation, (2) clientele, (3) functions, and (4) inspiration/affiliation.

Concerning the first classifying characteristic, GSOs and MSOs can be national or regional or, as shown in Figure 1.1, can encompass a multi-communal space, called a locality. Most of the organizations included in this study operate at the level of a specific region or are multi-regional. Even those that have a national charter and operate out of the capital city do not cover the whole country but rather operate projects in various locations. MSOs tend to be organized by multiple levels; co-ops or labor unions have their regional associations and frequently a national federation.

The second classification is by clientele. GSOs and MSOs work in either rural or urban areas, although some have both village and town beneficiaries. A fair number of GSOs serve distinct social groups, ethnic communities, women, children, and landless workers.

Their clientele can consist of individuals or more or less organized groups.

Turning now to function, some GSOs and MSOs are narrowly focused and specialized. More typically, however, they are mixed but clustered around a central purpose. For GSOs, three functional clusters predominate: productive and income-generating activities, social services, and networking. Most GSOs in the sample are involved in agricultural production. Significant sets of GSOs focus on education, health, handicrafts, and microenterprise. For MSOs, the two principal functions are providing technical and representational services and operating central facilities for members. The functional classification is represented in Figure 1.3.

The inspiration/affiliation of a GSO or MSO is generally related to its origins, dominant philosophy, and operational style. MSOs are frequently inspired by cooperative or labor union movements. GSOs may trace their origin to and affiliation with the Catholic church (or other religious groups), business interests, the academic community, or certain government initiatives. Table 1.1 gives the Inspiration/affiliation of a number of organizations in the sample.

The way this typology works can be illustrated by some of the cases in the sample. Centro de Investigación y Promoción del Campesino (CIPCA), a Peruvian GSO, is affiliated with the Catholic Church through its Jesuit leadership. It is regional in scope, working in the Department of Piura in northern Peru, with headquarters in the provincial capital. CIPCA has a predominantly rural clientele made up of peasant cooperatives and small farmers. It started out as an educational institution but is now more diversified with health and agricultural technology components (see the profile in Chapter 11).

Confederación Nacional de Cooperativas Campesinas (CAM-POCOOP) is a Chilean cooperative federation, an MSO assisting land-reform cooperatives. It is a national organization but works through regional affiliates that are the main operating entities. CAM-POCOOP offers a range of agricultural services, including credit and

Figure 1.3 Intermediary Organizations Classified by Function

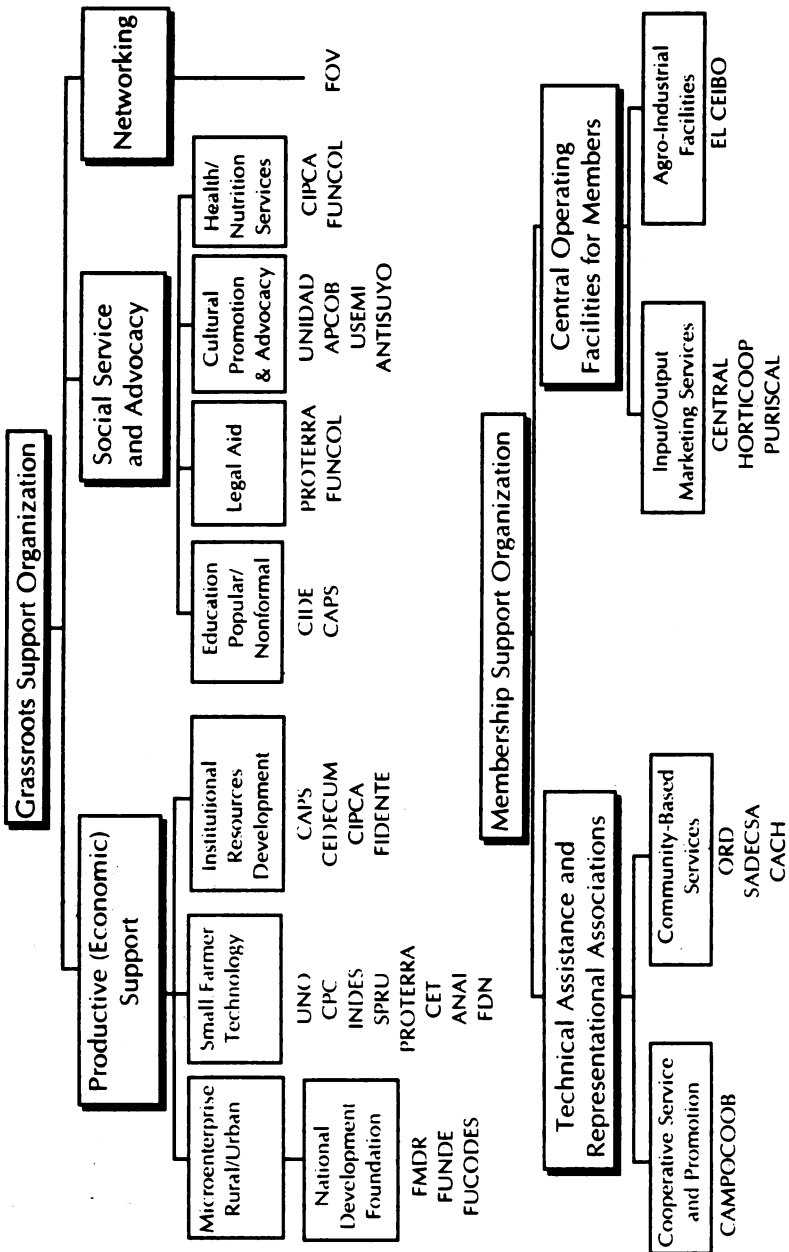


Table 1.1. Inspiration/Affiliation of GSOs and MSOs

Categories	Examples
Church inspired	CIDE
Business inspired (national development foundations)	FMDR FUNDE
Government-promoted civic collaboration	CACH PURISCAL
Cooperative inspired	CAMPOCOOP HORTICOOP
Professional/technical service (development catalyst)	CET INDES PROTERRA
Public service contracting	FDN
Ethnic advocacy and representation	APCOB USEMI FUNCOL
"Greens" (environment)	ANAI
Academic affiliation	FDN FIDENE
Land-reform beneficiary association	CENTRAL CAMPOCOOP

marketing and legal assistance. It has a genuine campesino leadership (see the profile in Chapter 13).

Fundação de Integração Desenvolvimento e Educação do Noroeste do Estado (FIDENE), a GSO in southern Brazil, drew its inspiration from the popular education movement and is now affiliated with a provincial university. It is regional in scope, working throughout Rio Grande de Sul. FIDENE has a mixed clientele, with a very strong influence among rural unions. The organization has gradually moved into more agricultural productive activities but also works on urban employment-related projects (see the description in Box 5.1).

The Fundación Mexicana de Desarrollo Rural (FMDR) is typical of a business-inspired GSO, one of a number of so-called national development foundations. It is national in scope but works only in certain states. Its clientele is primarily small commercial farmers, and its main service is production credit.

Fundación para las Comunidades Colombianas (FUNCOL) is a Colombian GSO inspired by advocates of Indian cultures (Indigenistas), and is one of the foremost legal-aid sources for native groups. It is national in scope but works in fourteen departments. In addition to its main legal function, it also has a health program (see the description in Box 3.2).

It should be pointed out that the GSOs and MSOs discussed in this book are not “voluntary organizations” as that term is often used (Alliband 1983; EBrown and Korten 1989). Although their board members or directors usually donate their time, management and operating staffs are compensated and most get regular salaries. Hence these organizations can be more properly thought of as non-profit rather than voluntary¹.

Brief Review of the Relevant Literature

There are no analytical and comparative studies that focus on intermediary-type organizations, although a few studies covering

general institutional development in the context of servicing the poor are indirectly and fragmentarily relevant. Most of these date from the early 1980s and reflect a renewed interest in development management and institutional development supported by the U.S. Agency for International Development (USAID), the World Bank, and some of the major private foundations.

Perhaps most notable is the work of the Cornell group. Eastman and Uphoff's (1984) pioneering study of local organizations in rural development systematically reviews public and private groups, including membership-based organizations such as cooperatives. In analyzing structural factors, the study isolates variables having to do with size, vertical and horizontal linkages, membership roles, and the public-private continuum on which various intermediary organizations are located. It also applies quantitative estimates of organizational performance, based on a set of cases collected from secondary sources.

Uphoff's *Local Institutional Development* (1986) is a massive and useful review of a much wider range of organizations, categorized according to various functions: (1) natural resource management, (2) infrastructure, (3) primary health care, (4) agriculture, and (5) non-agricultural enterprise. As mentioned above, Uphoff's "local" level can be made up of a group, a community, or a locality. Groups on this level are also known as grassroots or base-level organizations. Although the term intermediary is occasionally used to denote both public and private service or support institutions, Uphoff reserves the term intermediation for one of four alternative ways of decentralization. Intermediation, as Uphoff defines it, refers to the role of membership organizations (like cooperatives and other farmer organizations) in providing services that might otherwise be undertaken by government agencies or local government bodies. Other entities involved in decentralization are government agencies, philanthropic or private voluntary organizations that channel resources to the local level "where the state allows," and private enterprises that provide services through "marketization." Uphoff's overall analysis of strategies for supporting local institutional development is relevant and

useful to this examination of supra-local support organizations. Indeed, a fair number of Uphoff's case summaries, which take up about one-third of his book, include support of local development efforts by organizations that fall into the intermediary group.

The work of David Leonard and what has been known as the Berkeley group is also of interest, particularly a paper by Stephen Peterson (1982) that deals very intelligently with the functions, incentives, linkage to government, and sequences of special-interest organizations. One of Peterson's relevant and controversial points is that vertically integrated interest organizations with a single function are much more conducive to local group formation and effective service delivery than those that assume multiple tasks and promote horizontal integration. He writes, "The institutional blueprint for intermediate organizations in inegalitarian settings... should entail the vertical extension of single functions and the establishment of brokerage roles that facilitate vertical cooperation." (This conclusion appears to be based on a limited empirical basis. The Comell group's more systematic data and analysis [Esman and Uphoff 1984] gave rise to alternative conclusions.) In another paper in the Berkeley series, Leonard (1982a) stresses the "exclusive" nature of many support organizations for the poor in contrast to government service organizations, which are almost always "inclusive." He also elaborates a set of conclusions about assistance linkages and control linkages. He cites Esman and Montgomery (1980) in support of the proposition that "the need for the center (both government and donors) to provide assistance beyond simply finances to intermediate and local organizations is the great decentralization lesson of our generation" (Leonard 1982b, p. 36). This assistance by intermediaries (such as accounting by secondary co-ops) is seen as beneficial not only for the intrinsic value of the service but also to permit the primary groups to be more informal and therefore more accessible to control by their poorer members.

Samuel Paul (1982) dissects six successful national programs, each carried out by a large service organization, most of which are linked to the public sector but also display features of self-management. He looks especially at structural characteristics, autonomy,

decentralization, and what he calls the strategic management process. He concludes that strategic management is complementary to the roles played by political commitment and resources in program performance. Especially relevant were the following critical interventions: (1) focusing initially on a single goal or service, (2) diversifying goals sequentially, (3) phasing program implementation properly, (4) confirming organizational autonomy, (5) using network structures, (6) using sample information with fast feedback systems, and (7) selecting and training staff in a flexible manner. Surprisingly, Paul found no consistent explanatory value in different patterns of participation or of motivation of beneficiaries.

David Korten's work (1980, 1987a) has had a considerable influence on students of community organization and is of some relevance here, especially his concern with the linkages between donors and indigenous organizations. According to Korten, "linkage design" to facilitate the learning process should proceed through three phases: effectiveness, efficiency, and expansion. Most suggestive is his finding that the administrative styles of most governments and also large official financial donor agencies conflict with such a sequence. In a recent paper, Brown and Korten (1989) offer a good typology and suggest ways for donors to improve the developmental performance of NGOs. They single out a category they call voluntary organizations, or VOs, whose main task is grassroots organizing. Brown and Korten also point out that many of the weaknesses of VOs are a function of the same characteristics that give them their distinct advantages. The developmental role of VOs in empowering the poor is further elaborated by Korten (1990).

Relevant work on international development has also been done by a group of Dutch sociologists working out of Leiden. Caljart (1982) looked at the nature of reciprocity relationships between base-level groups and second- or third-level associations. He characterizes these relationships as direct exchange, or pooling of resources, which may encompass non-tangible or political exchange as well. The Leiden group has also made relevant contributions to the understanding of participation and to the conceptualization of the role of

the external change agent in capacity building (van Dusseldorf 1981). In one of these papers, Grijpstra (1982) points out the necessity of external initiative and support for the creation of groups with a participatory structure—one of the main issue in this book: “Paradoxically, top-down planning and organization may be needed for the poor to participate from the bottom-up” (p. 201).

In a brief document written for USAID, Hellinger et al. (1983) reviewed information from seventy primarily nongovernmental institutions with a focus on multiple collective units of beneficiaries. The review suggests that such organizations have characteristics in common, including a two-tiered internal structure with site-specific project development and facilitating functions backed up by central administrative and technical support. Unfortunately, the document presents no specific data or cases.

One of the most useful publications is another contract study for USAID prepared by a team of authors from Development Alternatives, Inc. (DAI) and Cornell University (1985). The foci of this study are two large U.S.-based private voluntary organizations: International Voluntary Services, Inc. (IVS) and the Institute for International Development, Inc. (IIDI). Much of the analysis is based on case studies of indigenous organizations assisted by expatriate private voluntary organizations, including samples from Ecuador and Costa Rica. This report is especially relevant here because it is one of the few published works that explicitly addresses the role played by indigenous intermediary and intermediate-level organizations and is particularly concerned with the issue of capacity building. Methodologically, the DAI/Cornell group has made an important contribution by developing thirty-four institutional development indicators. Organizations were rated on a scale of zero to five. One of the main conclusions of this report is that although the comparative advantage of international private voluntary organizations over other service delivery mechanisms is their ability to work at the grassroots level, their effectiveness to promote local institutional development may be enhanced by working with and through national intermediaries.

The PISCES (Program of Investment in the Small Capital Enterprise Sector) study (Farbman 1981) makes a significant contribution to the understanding of organizations that promote urban microenterprise. This is one of a very few reports based on excellent case material. Seven Latin American organizations, all of which can be considered intermediaries, are covered. The PISCES study identifies a number of organizational features that account for good performance, such as decentralized implementing structure, autonomy of field staff, modest size, and flexibility.

Judith Tendler's work on NGOs has been particularly insightful and stimulating for this study, especially the comparative perspective that infuses her work. In 1982 she reviewed seventy-five evaluations and other documents for USAID in order to assess the strengths and weaknesses of NGOs. Most of this material referred to the work of U.S.-based private voluntary organizations, but her critique, which suggested that they were not particularly participative, innovative, or apt to reach the poor, has challenged subsequent NGO analysts (1982b). Tendler's study of the early years of União Nordestina de Assistência a Pequenas Organizações (UNO) in Brazil (1983a) and her reports on Bolivian cooperative federations (1983b) and on Fundación Nicaragüense de Desarrollo (FUNDE) in Nicaragua (Tendler, Hatch, and Grindle 1984), the latter two for the IAF, identify the many internal contradictions inherent in Latin American NGOs and offer unconventional views on performance criteria, evaluations, and donor attitudes. Among other provocative ideas, Tendler has argued for elite co-optation rather than confrontation, cooperation with governments, a minimalist approach to services, and urban rather than rural strategies for poverty alleviation.

A useful comparative study of a segment of the intermediary NCO spectrum is Sally Yudelman's review of five women's organizations—all IAF grantees—in *Hopeful Openings* (1987). In addition to offering some conclusions specific to women's role in development, this study identifies other general dilemmas applicable to GSOs, such as the conflict between service and policy change, the problem of strong leadership, and the issue of too many activities and sound management.

As the number of NGOs has grown dramatically in Latin America over the last ten years, many of the larger and older organizations engaged in development research-action-advocacy (*centros de promoción social*) have agreed to meet together periodically. An outgrowth of these meetings has been an incipient intellectual effort to document and describe what these NGOs are and what they do. From this community has come a series of inward-looking papers and thought pieces examining the origins, roles, motivations, and relationships of NGOs in their national context. As expected, there is no agreement about what to call these organizations; however, researchers do recognize that important differences exist. Sergio Gomez's study (1989) of rural support organizations in Chile and Mario Padrón work on Peru (1982) and on Latin America in general (1986, 1987) are initial efforts to sort out the confusion -by setting out the existing institutional map and examining key elements (the goals, strategies, sectors, clients, and functions) of each organization. Padrón's designation of nongovernmental development organization (NGDO) comes close to the definition of GSOs used in this study. Although these papers and thought pieces exhibit a number of methodological difficulties, they also serve as a useful base for understanding the range and density of these organizations in specific countries. The most recent report (Arbab 1988) is based on a year-long collaborative learning experience by nine Latin American organizations that call themselves by Padrón term, NGDOs. This unusually frank self-critique, carried out under the sponsorship of Private Agencies Collaborating Together (PACT), analyzes the role of NGDOs in relation to their grassroots clientele, their donors, and their governments. A shared purpose is identified as capacity building at the base.

In 1986, a conference on intermediary voluntary organizations was held at Cambridge, Massachusetts, under the auspices of the Lincoln Institute for Land Policy and the Kennedy School of Government, Harvard University. The report of this conference, which consists of several conceptual papers and country case studies, presents some interesting generalizations: (1) the traditional distinction between "welfare" and "development" is diminishing as

intermediary support organizations (ISOs) find it attractive to act in both dimensions; (2) in the production field, the extension of existing technologies is more likely to succeed than the introduction of new ones, but in social service, new techniques are more likely to meet with success; (3) when ISOs have something that the governments want, instead of being petitioners or dependents, they can develop independent strength, leading to a good bargaining position (Carroll and Montgomery 1987).

Also notable is a collection of papers issued as a special supplement to *World Development*, which were presented at an NCO symposium in London in March 1987 (Drabek 1987). Although the main focus of the symposium was on North-South relations, a number of the papers dealt with the emerging role of national intermediary-type NGOs. In searching for effectiveness criteria, sustained capacity building was suggested by a number of Southern NGOs, and donors were urged to provide more core funding for this purpose.

Of methodological relevance is an evaluation of the African Development Foundation by the U.S. Office of Technology Assessment (OTA 1988). The evaluation team assessed a sample of twelve projects, eight of which were carried out by intermediary organizations. Performance was judged and scored under four sets of criteria: participation, results, sustainability, and replicability. Complementarities and trade-offs were also noted in the analysis.

In an important new study, *Learning from Cal Oya*, Uphoff (1992) recounts in great detail how tens of thousands of irrigators in Sri Lanka were helped to change from a disorganized self-destructive state to one of effective cooperation in a remarkably short time. Although the change agents in this case were a combination of academic and intellectual activists and government field agents, this work is relevant to the capacity building theme of NGOs in this book, both empirically and theoretically.

In a retrospective analysis of the evolution of Latin American intellectual history during the past generation, David Lehmann

(1990) provides a sociological macroframework for the phenomenon of GSOs. In tracing the broad ideological developments since the post-World War II period he explains the origins of the new type of social movements and of *basismo*, in which self-help development projects as well as lobbying and protest became more legitimate and part of a search for a more open, more equitable civic society. In Lehmann's opinion, Latin American post-Marxist intellectuals now place less reliance on the state sponsorship of local organizations, because "the sources of solidarity lie neither in the state nor in a mythical pre-capitalist commune" (1990, p. 197). This signifies an evolution toward a modern liberal and less corporatist view in which grassroots organizations can coexist and have reciprocal relationships with the state. He observes that the professionalization of grassroots movements and of their leadership helps to render the bureaucracy more responsible and avoids "the colonization of that apparatus in the time-honored style of Latino politics" (Lehmann 1990, p. 197).

Lehmann thinks that to become effective, grassroots organizations have to acquire higher-level and large-scale operating affiliates and that GSOs are needed to bridge the gap between base organizations and government. He is somewhat pessimistic about the managerial potential and sustainability of grassroots organizations, concluding that the strengthening of GSOs may be seen as elitism by some, but it is potentially the most effective way of improving the management of popular organizations and achieving greater stability of participatory self-help initiatives, which are successful in great part precisely because they are not formalized.

Consensus and Controversy

What are the main lessons that may be drawn from the relevant literature, and what are some of the major currents of thought that reinforce the frame of reference of this book?

First, although a great deal has been written about NGOs, there is little scholarly analysis of intermediary NGOs and of those that offer developmental services to grassroots groups. Studies based on

primary observations and field research are especially scarce. Little is known about how these organizations interact with their beneficiaries or partners and with the power centers in their countries. This lack of documentation is disproportionate to the growing importance of GSOs and MSOs in the developing world.

Publications on NGOs tend to lump many kinds of organizations together so that lack of discrimination diminishes their usefulness. The heterogeneity of the universe of NGOs defies most analysts. There is either too little useful discrimination or there is too narrow a focus on specialized entities. The nomenclature is confusing: there is no agreement on typologies or on the use of the acronyms invented by various authors. With respect to performance, most evaluations deal with projects rather than with organizations, and there is a tendency to see the effectiveness of NGOs in terms of black and white. There are too many ardent admirers and also a good number of skeptics who minimize or dismiss the importance of NGOs.

On the positive side, the literature offers some convincing arguments for the existence of grassroots support institutions that are neither governmental nor business. It also justifies the evolution of their development functions. However, the NGO literature suffers from a strong case of antigovernment bias, to the point where NGOs are seen not only as opposed to the state but as alternatives to the state. This attitude is fueled by neo-conservative "rational choice" theorists, by celebrants of the informal economy, and by the strong U.S.-led push for privatization by means of the microenterprise sector. However, more balanced views are now emerging, in which some of the utopian and confrontational attitudes are moderated, so that GSOs are encouraged to interact with both the state and the market. Such a linking role for GSOs-support linkages rather than the usual control linkages (Leonard 1982b) - is highlighted and developed in this book

A less rigid ideological attitude is also evident among the intellectual leaders of the Latin American GSOs (or centros) as they have matured and become more professionalized and as state repression has diminished. More is now heard about the need to improve the

government's performance in social services and public goods, akin to the earlier theme of scholars in development management about bureaucratic reorientation (Montgomery 1988). Hope is even expressed about the possibility of a depoliticized grassroots support system that could function without paternalism and without outside interventions necessarily leading to dependency. At least in Latin America, NGOs and their self-help projects are beginning to be seen less as a sideshow and more as central elements in the move toward a more just and participatory society (Lehmann 1990).

On the other hand, there is less consensus and more controversy on some of the issues that are at the heart of the relationship between intermediary support organizations and their base constituencies. One such recurring question is the "organizability" of the grassroots population of the poor. This, in turn, is part of the broader ongoing debate about the viability of popular institutions based on cooperative behavior. During the late 1980s profound pessimism prevailed about the future of cooperation. The dominant paradigm extolled the virtues of individualism and competitive behavior favoring institutions based on such behavior especially as socialism disintegrated in Eastern Europe. Yet the 1990s opened with a somewhat greater optimism about the potential of collective action especially in resource management but also in other dimensions as long as the internal and external environment was favorable ("enabling") to the release of the requisite "social energies" (Hirschman 1984; Uphoff 1992; Putnam 1992).

The potential of grassroots groups and their aggregations to develop sustainable management skills is once again affirmed but only if these can develop effective support linkages. However there is still too little knowledge about and solid theorizing on the optimum levels and scale for self-management tasks. Nor is there any consensus on the ultimate role of self-help participatory structures within the modern technologically sophisticated economy.

These gleanings from the literature will be used throughout this volume partly to illuminate and interpret the findings of the study and partly to endow this work with greater comparability and general applicability.

NOTES

1. Brown and Korten (1989) divide NGOs into four types: voluntary organizations (VOs) peoples organizations (POs) public service contractors (PSCs) and hybrid governmental/nongovernmental organizations (GONGOs). In this scheme VOs are value driven with their members contributing time and money to a cause; PSCs are market driven and offer services to client. Developmental intermediary GSOs, as used In this book do not fit into Brown and Korten's categories. They are neither as purely visionary as VOs nor as commercial as PSOs. However, MSOs can be accommodated in the Brown and Korten typology as higher-tier POs.

SERVICE DELIVERY

T. F. Carroll

■ The most direct, observable function of grassroots support organizations (GSOs) and membership support organizations (MSOs) is the provision to their beneficiaries of goods and services that are wanted, needed, or otherwise unavailable. The literature on non-governmental organizations (NGOs) generally stresses their superior ability to serve populations that are not reached by public agencies.

Delivery of Service: A Means or an End?

Most GSOs and MSOs in this study have set for themselves ambitious and bold goals that inspire and guide them in their work. Some of these goals cover the services they provide; others refer to intangibles such as promoting participation or democratic values or the self-image of members. What these groups actually spend most of their time doing, however, is providing services to base groups. The nature of service varies by type of intermediary, as mentioned earlier. GSOs provide production support, social services, linkages to resources, and networking; MSOs provide technical assistance and representation and central operating facilities.

The delivery of these services is supposed to produce a palpable increase in the well-being of the groups attended. Twelve organizations in the sample (40%) can be considered principally service providers. The majority (eighteen organizations, or 60%) provide services in conjunction with their roles as development catalysts and capacity builders. Both the recipients and the donors involved with the latter group of organizations believe that it is valuable to make a direct impact on beneficiaries' standards of living. However, that is not usually their main purpose, although it is considered a prerequisite for reaching broader and more distant goals. The problem is that GSOs and MSOs often face so many difficulties and complications in providing service that they tend to neglect their broader goals. Thus, services that were intended as a means frequently become the end. It is interesting to note that this tendency to stress service per se to satisfy short-term needs is often encouraged by both donors and recipients. This apparent paradox is discussed further in Chapters 6 and 8.

This said, the first thing that distinguishes the selected GSOs and MSOs is their outstanding ability to implement projects, an ability rarely found among the national service providers (public or private) in most Latin American countries. This capacity has been built up through hard experience over the years. By the mid-1980s virtually all of the thirty organizations had displayed an impressive ability to get things done on time and with reasonable efficiency. Seed, tools, or fertilizer were distributed before the planting season; credit requests were processed expeditiously; courses or demonstrations were effectively organized; machinery was maintained; and so on. Given that these organizations often control only a part of the system necessary to supply the service and make it usable, their record is all the more remarkable. It demonstrates that for GSOs and MSOs, success involves not only proper internal management but also the ability to influence and leverage others (banks, suppliers, and the beneficiaries themselves).

As long as these organizations are operating almost exclusively on foreign money, the notion that they should replace government in some areas and with some social groups appears untenable. It fol-

lows that they should emphasize capacity building or viability-upgrading services, not routine services—a major point in this study. This view is strongly endorsed by Brown and Korten in a recent study prepared for the World Bank. They write, “voluntary service organizations (VOs)... perform important social functions, but unless they are developing the capacity of indigenous organizations to replace them in their functions on a self-sustaining basis... they cannot claim to be doing development work” (Brown and Korten 1989, p. 11).

Conceptually, it is the idea of self-provisioning that separates GSOs from MSOs. The latter, being organizations of the service users themselves, provide the basis of a self-sustaining delivery system. The institutionalization of the latter implies either eventual coproduction of services with government or the creation of more permanent specialized service agencies with their own sources of income. This trend is clearly visible in Uruguay, where Instituto de Promoción Económico-Social del Uruguay (IPRU), a CSO, has given rise to a whole network of small-farm service entities, and in Costa Rica, where small-farm productive services are performed by a set of mixed private-public regional corporations.

Basic Service Delivery Strategies

A central feature of effective rural social service delivery strategies is compatibility or a “good fit” with the existing rural household and community system. Services fit well if they are sensitive to the interests articulated by peasant groups and based on a thorough understanding of local farming systems and the peculiarities of the local peasant economy. GSOs and MSOs acquire knowledge about seasonal labor demands, migration patterns, cultivation, and marketing practices from field research and through direct involvement in various projects. Regionally established GSOs and MSOs (or decentralized branches of national organizations, such as FDN in Peru) have a special advantage in acquiring this sort of local knowledge, which is discussed in a later section.

Devising effective development strategies is crucial to good service delivery. This includes setting objectives, choosing means, and

devising tactics. The services themselves, such as credit, training, and legal help, can be understood and properly evaluated only in the context of the particular development strategy. Four basic strategies for deploying rural development services were employed by the GSOs and MSOs under study: semisubsistence agriculture, small farm-based business, rural non-farm employment, and social community services. The first three aim at increasing the productivity of the poor by upgrading labor skills, capitalization, job creation, or market penetration, the fourth strategy covers "entitlements," or basic social needs.

Semisubsistence Agriculture

The first strategy is to improve the ability of farm households to achieve a secure family subsistence (especially in terms of food and nutrition) with minimal cash outlays. This strategy often promotes traditional farming practices and makes maximum use of locally available and locally controlled natural resources. Most new output is consumed by the producing families themselves, the remainder being sold or bartered locally. This strategy may be characterized as "inward oriented," the microequivalent of an autarchic macropolicy.

In agricultural development circles, subsistence farming has a bad name because agrodevelopment normally strives to eliminate subsistence and achieve production for market with a reduced labor force. Hence semisubsistence agriculture is an area where neither government nor commercial services are readily available. But subsistence is still a key objective for millions of rural households.

The semisubsistence agriculture strategy stresses basic consumption, nutrition or health, less dependence on the cash economy, and greater security of subsistence. The strong contribution of GSOs working on semisubsistence agriculture is explained largely by the scarcity of public services, the relative poverty and ethnic and physical isolation of the populations served, and, in some cases, by the hostility of repressive governments toward small farmers. MSOs tend not to follow this strategy, as they commonly represent commercial farmers. The major exceptions are ethnic federations, but these were not included in the study sample.

Most subsistence functions are adjuncts to other activities or represent a small component rather than the core program of the organization. They often serve as part of a sequence to reinforce other activities. On the Caribbean island of St. Vincent, for example, the Organization for Rural Development (ORD) uses improved subsistence and basic food crops as the first phase of its technical assistance sequence. Then, after some experience and confidence building, it moves on to the production of local cash crops and finally to specialty and export items, activities that require increasingly greater sophistication on the part of the farmers.

A number of socially inspired GSOs, among them Unidad Educación para el Desarrollo de Chimborazo (UNIDAD) in Ecuador and Ayuda para el Campesino del Oriente Boliviano (APCOB) in Bolivia, place a high priority on improving the nutritional status and providing the basic food needs of the poorest rural families, who have too little land and other resources to earn much cash income from farming. In some cases, this strategy involves restoring the cultivation of historically important native crops, such as the nutritious quinoa of Inca times. Although the original motivation for the reintroduction of these neglected plants was nutrition and ecology, it so happens that some of them (quinoa included) are now in demand as health foods and have thus increased in cash value. Sometimes a nutritionally significant crop is introduced, such as high-protein lysine corn in the case of ORD in St. Vincent.

Some GSOs among the study organizations espouse self-sufficiency as a goal rather than as a transitional state. They tend to have an idealistic, almost romantic vision, promoting self-sufficient attitudes to combat helplessness and dependency and attempting to isolate their clients from the rigors of the market and the "evils" of capitalism and commercialism. This goal is not only unrealistic but, more often than not, contrary to the world view of the social groups these inspired outsiders assist. Several GSOs in the sample abandoned this utopian position for socioanthropological (ANTISUYO, APCOB) or ecological reasons (ANAI). What remains is a healthy skepticism about the virtues of the "open economy" and a more balanced prag-

matic stance that permits strengthening capacities to meet the subsistence needs of vulnerable groups without demanding closure. (In regional economics, "closure" is the internal articulation of a region's economy and a reduction of trade with other regions.) There is not a single GSO or MSO among the thirty whose clients do not have at least one foot in the cash economy.

Perhaps it is more accurate to characterize the semisubsistence strategy as low-input agriculture, in which dependence on purchased inputs is reduced and ecological sustainability is promoted. Asociación de los Nuevos Alquimistas (ANAT) in Costa Rica stresses locally available resources in its tree nursery and other projects. No sophisticated concentrates or fertilizers are used. If a species of tree does not survive with what can be readily obtained locally, it is considered inappropriate for the region. ANAI believes that low-income groups cannot afford such inputs and should not go into debt for them, especially in the initial phase of growth. Subsistence and commercial cropping systems are designed to achieve food security first and to make the system resilient to both disease outbreaks and a steep fall in prices.

The Chilean development organization Centro de Educación y Tecnología (CET) exhibits this pragmatism while seeking subsistence security for its clients. It is a thoroughly technical and professional organization intent on providing the rural and urban families sidelined by the Chilean economic model, based on large firms and unemployment, with a low-cost alternative livelihood. CET designed five basic production systems based on bio-organic recycling, starting with a simple one that can be carried out with a minimum of land and virtually no purchased inputs. These limitations are in keeping with the circumstances of small farmers and rural laborers. The technical package is disseminated by way of local monitors trained by CET, and demonstrations and training are conducted at three regional centers. Initial hands-on training is followed up by site visits from CET staff or monitors. Because of the high initial risk involved in switching to an entirely new production system and the labor-intensive nature of the process, many small farmers have been reluctant to

adopt the organic methods despite the promises of less dependence on costly inputs and ecological conservation. Rural town dwellers and urban unemployed women and youth, however, have been more receptive, and urban gardens have become ubiquitous features of the barrios where CET monitors have been working.

Small Farm-Based Agribusiness

The second development strategy of the organizations in the sample is to provide support services for the more market-oriented production systems of small farm-based agribusinesses, which range from semicommercial farming with one or two cash products (often for regional consumption) to full market production of high-value output for metropolitan and export demand. The services provided are intended to lead to successful diversification and generally involve improvements in basic infrastructure, such as irrigation or land leveling and terracing. These, in turn, require new and adapted technologies suitable for specific microenvironments and demand and marketing channels. In contrast to the inward oriented semisubsistence strategy, this approach is outward oriented.

Most of the intermediary organizations in the sample concentrate on testing and diffusing productive technologies and supplying or facilitating farm inputs. Some of the techniques that explain their strong performance are described below.

Respecting Local Practices. Innovations are carefully introduced into the farming system without replacing key food crops or damaging the local agroecology and with due respect for family and community patterns of labor allocation. Good results have been achieved by extending already familiar practices. Instituto de Desarrollo Social y Promoción Humana (INDES), for example, rather than introducing new crops or other untried techniques, provided its client farmers in Argentina with credit to rent animal power, thus freeing farm laborers for other important tasks. By encouraging farmers to employ familiar techniques rather than new ones, INDES reduced the risk the farmers took to increase productivity.

Some breakthroughs have been achieved by introducing completely new, high-payoff crops (marigolds or peaches in the Mexican state of Michoacan, broccoli and snow peas in Guatemala, spices in Costa Rica). In these cases, functioning marketing channels and agribusiness connections were an absolute necessity to assure a payoff from the new farm technology. The technical complexities of such diversification systems often place too many management demands on both the GSOs and MSOs and the peasant groups concerned as well as increasing the risks and dependence on unstable demand. In some cases, the production of high-value specialty crops (for example, flowers and strawberries for export) has also tended to increase the social differentiation within communities and has embroiled local producer associations in conflicts with private traders and processors. In its attempt to market products from its newly introduced beekeeping enterprises, Fundación para el Desarrollo Nacional (FDN) and the beekeepers' association were faced with intense opposition from private traders (one of whom had previously worked with the FDN and had close relations with some of its board members), who saw the FDN's active role in marketing as a threat to their interests.

One lesson is that diversification works best when the new activity can build on existing experience and when the support organization has access to critical aspects of the agribusiness system, not simply competence in delivering a single service such as credit or extension. Another general finding is that the more sophisticated the new technology, the greater the risks as well as the likelihood of inequality in the distribution of benefits. The exception seems to be when the new technology is based on a collective rather than an individual enterprise (wool in Uruguay, cacao in Bolivia), in which case a central agroprocessing operation can have significant benefits for individual small-scale producers.

An unplanned bonus from many decentralized diversification programs is the multiplier effect from regional linkages. The impact of using locally produced, low-cost inputs is often maximized with the additional benefit of enhancing backward supply linkages (car-

penry for FDN beehives, hand tools and homemade looms for hand-craft projects, local bricks for UNIDAD bakeries). It is interesting to note that although these indirect effects are frequently noted in evaluation reports, neither the Inter-American Foundation (IAF) nor its grantees seem to plan for or try to enhance them.

The case of *Consultores del Campo* is perhaps the best way to illustrate the low-cost, risk-reducing strategy employed by some of the top GSOs. *Consultores*, a small rural advisory group formed by young professionals, works in the Lake Patzcuaro region of central Michoacan State in Mexico, practicing community-based rural development. In a recent research report, Robin Marsh, using quantitative economic methods, compared the *Consultores* model with a more traditional research/extension system employed by a government program for rain-fed maize improvement in the same area (Marsh 1991). The PIPMA program, as the government's program was known, recommended higher levels of inputs and higher-cost practices. It was a failure, even though it offered rather attractive guarantees against losses. For farmers following PIPMA's advice, net benefits barely covered production costs; campesinos affiliated with *Consultores* had almost 50 % higher yields and more than double the per hectare net benefits. Marsh concluded that the community-based non-official program run by *Consultores* was effective in both improving small-farm productivity and in reducing risks because it (1) offered technological options tailored to site-specific agroeconomic conditions, (2) incorporated reasonable estimates of production risk (and of farmers' attitudes toward such risk) in the formulation of recommendations, and (3) provided for a highly participatory testing and diffusion of innovations. If the regional benefits obtained with the *Consultores* strategy could be obtained statewide or nationwide, a 20% increase in maize production and small-farm income could be achieved.

The significance of this case is even greater than that indicated by the data. Since the famous Puebla project sponsored by the Rockefeller Foundation in the 1960's, Mexico has evolved a sophisticated system of technology generation and diffusion in the dryland

farming areas that were bypassed by the green revolution, where most of the country's rural poor are concentrated. Puebla was followed by various maize programs assisted by the National Agricultural Graduate School at Chapingo and later by CIMMYT, the international Research Center for Maize and Wheat, located nearby. Yet the astonishing evidence from Michoacan is that a small GSO made up of young university graduates can outperform a seasoned extension service that was the beneficiary of more than two decades of experimentation and experience.

Table 3.1 indicates to what extent the community-based rural development system of technology diffusion differs from two other systems: one characterized as "traditional" and the other as the "farming system" approach, which has been in vogue since the late 1970's. The third column reveals the success of the process: Technical services to resource-poor and risk-prone campesinos are effective if they are adjusted to micro-conditions through participatory means and if they are part of a community empowerment effort.

Developing Alternative Marketing Channels. In areas of high commercial activity, GSOs and MSOs generally seek to promote alternative marketing channels designed either to fill gaps in the existing system or to challenge commercial traders and middlemen to become more competitive.

Several of the organizations studied have sought to stabilize the prices of agricultural inputs and basic consumer goods in rural areas by establishing local consumer stores (PURISCAL), engaging in merchandise wholesaling (EL CEIBO, URCOOPAPA, CENTRAL), or arranging for direct distribution through field agents (IPRU-supported Comisión Nacional de Fomento Rural), with varying levels of success. There are tensions between distributive and commercial goals and, for MSOs in particular, between an exclusive model serving only members and an operation in which both members and non-members are served in order to achieve economies of scale. Central de Cooperativas Agrarias de Producción "3 de Octubre" (CENTRAL) and Union Regional de Cooperativas de la Provincia de Cartago

Table 3.1 Comparison of Technology Diffusion Approaches

Key Aspects	Alternative Systems		
	Traditional System	Farming System	Community-Based Rural Development
Objectives	Maximum yield More income per hectare	Improved productivity of total resources of the farm enterprise	Improved total household welfare Community empowerment
Research strategy	Experiment station based. Pursuit of Technical optimums	Field based Technological packages targeted on agroecological domains	Optimization of existing resources Selective adaptation of modern practices to meet community needs
Extension strategy	Focus on commercial farms	Focus on small farmers. Reliance on demonstration by progressive farmers. Recommendations for average conditions	Focus on resource-poor farmer-manage test and peer diffusion; learning by doing; training in technical, social, and organizational skills
Credit strategy	Access to commercial credit assumed	Access to subsidized credit assumed	Promotion of community-based financial options, revolving funds, cooperative input/output distribution
Income strategy	Emphasis on monocrop agriculture	Optimization of all farm resources. Stresses diversification. Off-farm labor is treated as a constraint	Includes concern for off-farm income, women's status and earning. Stresses sustainability of resource use

(URCOOPAPA) offer discounts and credit only to members but also sell to non-members at regular prices. Other cooperative federations achieve a large volume of sales by being nonexclusive. Cooperative agribusiness is especially vulnerable to macroeconomic crises, as evidenced by Centro Regional de Cooperativas Agropecuarias e Industriales's (EL CEIBO's) severe losses during Bolivia's hyperinflationary period in the mid-1980s.

In their efforts to bypass middlemen and directly market small-farm production, some programs also tend to reduce the availability of production credit, generally supplied informally by these same middlemen buyers. To avert this problem, Centro Agrícola Cantonal de Hojancha (CACH) managed to negotiate with the Costa Rican government to achieve a *zona cafetalera* status in its production area, which thereby opened up a line of credit for its client coffee growers. Freed from dependence on informal credit arrangements, these farmers subsequently organized a cooperative to process and market their production directly. In a similar vein, the IPRU-sponsored Central Lanera Uruguayaya (CLU) (Woolgrowers' Cooperative Federation) sought to fill the credit gap by providing advance payments at preferential interest rates to wool growers that committed their harvest to member cooperatives in advance (see Box 3.1). Overall, marketing projects have been more successful when peasants were not traditionally tied to middlemen or when credit could be provided along with marketing services.

Other programs have sought to develop alternative marketing channels through vertical integration, with the GSO or MSO itself serving as intermediary between producers and markets. In one of its early activities, CACH bought vegetables from an agricultural diversification project and sold them to Costa Rican government-supported schools and nutrition centers. However, when a fiscal crisis forced the government to cut back these programs, the enterprise and, consequently, the program failed because CACH had sought no other outlet.

As these examples imply, commercial marketing programs demand sophisticated organization and finance and a thorough

Box 3.1 IPRU: Cooperative Marketing Promotion in Uruguay

Instituto de Promoción Económico-Social del Uruguay (IPRU), a classic GSO that provides leadership and skill training to the Uruguayan cooperative sector and supplies expertise to the small-farm sector in general, has been a key element in designing and implementing a system of alternative marketing for small-farm production. Working with first- and second-level organizations in rural Uruguay, such as Central Lanera Uruguaya (CLU), IPRU has strengthened cooperative marketing capacity by providing education, training, and evaluation services as well as brokering arrangements between these organizations and external funding agencies. The organization has also encouraged active farmer participation in collective marketing operations and decision-making.

Originally founded in 1966 by a group of business leaders and professionals to assist both rural and urban grassroots organizations, IPRU was forced to refocus its operations toward rural areas to escape the new military regime's increasing repression and intimidation of urban participatory groups. In one of its first efforts, IPRU provided support and technical assistance to the Comisión Nacional de Fomento Rural (CNFR), a national representative organization of small farmer societies, in implementing its contracted crops program. The program involved the formation within each society of producer committees, one for each commodity, which supervised the channeling of CNFR-provided production credit and agricultural inputs, coordinated the provision of technical assistance, and, at the national level, participated in decisions made on prices and marketing. Though the program itself met with mixed results, the positive impact of the revival of formerly inactive farmer societies and the

experience gained through farmer participation in democratic decision-making was significant in the long run.

The Sociedad de Fomento Rural de Durazno, a dairy farmer cooperative, drew upon its experience with CNFR's program to expand its collective processing and marketing capabilities. With continued assistance from IPRU in human resources development and negotiations with external funding agencies, the Durazno cooperative is now operating one of three successful producer-managed milk-processing plants in Uruguay.

In another successful effort, IPRU was instrumental in the development of the Federación de Sociedades de Fomento del Nordeste de Canelones, a second-level organization with a membership of six minifundista cooperatives that promoted the production and marketing of alfalfa as an alternative crop. By providing technical assistance in administration and brokering IAF funding in support of the federation's service delivery, IPRU enabled Canelones not only to introduce, develop, and market a successful new cash crop, but also to become a defender of the interests of small farmers in the region.

In implementing its small-farm development strategy with limited resources, IPRU has sought to forge links, both horizontal and vertical, among base groups and cooperatives, second-level organizations, and other development organizations, including external funding agencies. Its coordination of these linkages has served to broaden the impact of this and other similar development initiatives in Uruguay.

knowledge of the commodity system, which calls for specialization within the management of the GSO or MSO. The previously mentioned CLU program is a case in point. This producer-managed second-level organization, with a membership of thirty-five wool-grower cooperatives, opened a processing center to receive and classify its members' wool production. When the crop was sold after months of negotiations, CLU returned to the farmers an average price for each grade of wool, thereby recognizing quality and evening out short-term fluctuations in world market prices. CLU's operations have not only secured better prices for cooperative producers but have also set standards in pricing policies, classification schemes, and payment schedules to which other wool-market intermediaries have been forced to conform in order to remain competitive.

Because marketing activities call for personnel with special skills, the marketing components of projects with a different original focus have generally not worked well. A marketing component may be hastily thrown in because of donor or beneficiary interest and, as a consequence, may not be given the necessary attention.²

The mixed results of the marketing component of FDN's beekeeping project illustrate the difficulty of adding such a component to a project primarily involved in production and credit. Although adept at demand promotion, quality control, and contract negotiation, FDN had little experience in developing the capacity of the beekeepers' association to administer the collection of produce for sale. Lack of attention to this crucial element, as well as strong resistance from middlemen, severely hampered the development of the beekeepers' marketing potential.

In general, micromarketing projects show a high failure rate due largely to heavy dependence on exogenous macrofeatures such as price and trade policies, urban subsidies, or exchange-rate restrictions. But farmer-run marketing associations or co-ops have frequent internal problems as well. Corruption and double-dealing are tempting. In the case of CENTRAL, a forceful leader exposed the endemic practice of personal under-the-counter deals with large private sup-

pliers. The FDN case mentioned above shows that elite support was readily mobilized for production (bees were useful to the owners of large orchards for pollinating their trees) but not for marketing, where the interests of small beekeepers and local merchants diverged. Yet, with the above caveats, GSOs and, in particular, MSOs have a special role to play in supporting base groups in marketing. Given the evidence, this role should involve assistance in dealing with the market more effectively and developing new sources of demand rather than taking over marketing and processing activities.

Relying on Agricultural Extension. The GSOs and MSOs in the sample make full and effective use of field extensionists familiar with local conditions and languages, along with farmer experiments and demonstrations. The experiences of these organizations contradict the notion of some rural development researchers who maintain that investment in agricultural extension has little value when compared to research or credit (Perraton et al. 1983; Hayami and Ruttan 1985).

Essentially, the GSOs and MSOs in the sample have changed the traditional nature of extension services. Instead of relying on outside specialists to disseminate a package of information and techniques, many have employed field promoters with an excellent knowledge of the language, circumstances, and people in the areas in which they work. These promoters tend to function as problem solvers rather than as only technology disseminators (the traditional role of extensionists), working with beneficiary groups to identify their needs and link them with the appropriate resources. Through this responsive approach and sensitivity to beneficiary circumstances, these new-style extensionists gain the trust and respect of their clients.

In Peru, for example, Centro de Desarrollo para el Campesinado y del Poblador Urbano-Marginal (CEDECUM) extension teams, working in a region of predominantly Aymara-speaking subsistence farmers, were made up of staff fluent in Aymara. Thus, they were able to conduct all courses and organizational meetings in terms most familiar to the beneficiaries. Also, by living within the community receiving support, CEDECUM staff became more or less intimately

acquainted with the beneficiaries and their needs and gained their trust by responding to those needs. In fact, due to CEDECUM's staff shortage, more time was actually spent on organizational issues and strategic problem solving than on technical dissemination.

Because many of the sample GSOs and MSOs employ rather small staffs, they utilize various strategies to stretch their capacities. Some seek to train monitors, or paraprofessionals, within participating communities to further spread technical information and distribute agricultural inputs. Others, such as Centro Paraguayo de Cooperativistas (CPC) in Paraguay, have established demonstration plots and experimental farms that serve not only as training and research centers but also as a means to lessen the risks perceived by small farmers in adopting new techniques.

Most of the organizations engaging in extension prefer to deal with groups or group leaders rather than individual farmers in order to achieve the most impact with their scarce resources and elicit greater levels of participation from their clients. This is a feature of all the cases, especially those in which credit is combined with extension (FMDR, FUNDE, UNO, and CAPS, for example).

A number of organizations in the sample have successfully implemented basic literacy and numeracy training for adults in conjunction with normal extension services. For instance, in its efforts to strengthen the capacity of Peruvian peasants to manage and increase the productivity of their newly acquired lands, Centro de Investigación Promoción del Campesino (CIPCA) started with a small program of adult literacy before moving on to provide technical and credit support. In a Latin America-wide study, nonformal rural education has been found to be positively related to the diffusion of technology (Figueroa 1986).

Providing Legal Services. Legal and administrative services provided by GSOs or MSOs to achieve security of land tenure are increasing in importance. Governments are notoriously slow and inefficient in this field, employing cumbersome practices marked by

political favoritism and petty corruption. Protection of occupancy for settlers, squatters, or ethnic groups and clarification of land titles in post-reform situations provide a foundation for all sustained efforts to upgrade farmer income. Legal services, especially those concerning land tenure and water rights, address a fundamental issue of many small farmers: security. If security is not established, beneficiaries hesitate to make investments. In a number of instances, a tenure security program has served as a base for an organization to launch other activities.

An outstanding example is provided by Instituto Tecnológico Agrario Proterra (PROTERRA), an organization that works with groups of Peruvian land-reform beneficiaries in the Lurin Valley near Lima. Caught up in the general dissatisfaction with collective enterprises in the post-Velasco period, the *parceleros* (smallholders) of Lurin faced a double threat. If they dissolved their production cooperatives without setting up some legally sanctioned substitute, they would not be able to obtain credit and other needed assistance to make it on their own. Also, as individuals, they were exposed to the claims of former landlords hoping to repossess their holdings. Working first with collective groups, and later with individuals, PROTERRA's legal team developed a strategy for processing the necessary titles quickly. In this effort, PROTERRA did not simply serve as a *pro bono público* lawyer, but it took up the whole cause of the *parceleros*. Armed with a thorough understanding of the legal and bureaucratic processes and options available, PROTERRA applied subtle but consistent pressure on key individuals in the appropriate agencies, leveraging concessions, commitments, and procedural changes that ultimately sped up the titling process and educated both farmers and agencies responsible for land tenure on how to work together more effectively. Once titles were secure, PROTERRA continued to serve its clients with agricultural extension and credit assistance so that the *parceleros* could make the successful transformation from collective workers to independent small producers.

This whole process was embroiled in ideological and political controversies, through which PROTERRA has managed to maintain a

balanced pragmatic role. In fact, this is a case that redefines the concept of an "intermediary." Rather than acting as a retailer of donor resources, or even as a substitute patrón to perform a brokerage role for its clients, PROTERRA has developed into an invaluable resource for both peasants and the government. This GSO not only made the connection, but, through legal research and superior expertise, it has greatly improved the service itself.

Although the above discussion of legal services is in the context of enhancing tenure security for small farms, there are a number of important organizations that extend legal protection and advocacy in other realms such as human rights or the environment. Fundación para las Comunidades Colombianas (FUNCOL) is a good example. FUNCOL's work with indigenous populations in rural Colombia began with legal aid to individual Indians involved in civil and criminal cases, many related to questions of land tenure. As FUNCOL's lawyers gained the respect and trust of the Indians, the judges, and the communities at large, the legal team began taking on cases to assist entire Indian communities in recovering, defending, and legalizing land and in obtaining personerfa jurídica (incorporation as legally recognized entities) in order to receive credit and other forms of government assistance. FUNCOL's activities later expanded to promote the drafting and enforcement of legislation affecting indigenous groups and to educate the public about Indian rights and struggles. Through its continued efforts, FUNCOL has achieved some notable legislative successes (for example, the passage of a bill to reform the national Indian education system), and its services are in high demand.

General legal services GSOs, although representing a small share of the IAF's portfolio, appear to be solid, highly effective organizations. A review of ten years' funding by the IAF for legal services confirms the position taken in this study: Specific legal aid to the poor by private voluntary groups is a stepping-stone to collective advocacy, legislative reform, and improvements in the accessibility and performance of the legal system (Liebensohn 1984).

Non-farm Employment

The third strategy for rural service delivery is to generate non-farm employment either in the countryside or in small rural population centers. GSOs have excelled in assisting craftspeople, not only by helping them market or improve their handicrafts but also by encouraging them to maintain the intrinsic artistic and symbolic quality of their traditional crafts, which might otherwise disappear. Asociación Civil Antisuyo (ANTISUYO), an anthropologist-led civic association in Peru, is an interesting example. Having found markets for fine Amazonian crafts, the association has seen an amazing burst of creativity among the native potters and weavers (Ricca 1987). In turn, this burst of activity has created numerous employment opportunities within the rural communities ANTISUYO serves.

Outside of handicraft production, GSO activity in rural industries is still limited but very promising. Activities that use local materials and fulfill a local and regional demand, such as baking, brick making, or hand-tool manufacturing, have been especially valuable. In its work with Quechua Indian communities in Ecuador, for example, UNIDAD has achieved great success in establishing communally owned and operated bakeries through its Bread for Education program. In addition to providing employment for an average of seven people per community, these small bakeries also benefit the entire community by producing high quality, low-cost bread and by channeling a portion of the profits to other community projects and to a scholarship fund that enables local students to continue their education.

Another alternative is piecework on specific labor-intensive industrial processes, such as shoemaking or sewing clothes. The work is performed in the villages-usually by women-and then transported to a market town where the business is based. Many of the most promising rural enterprises are located in small towns and market centers, where infrastructure, transport, and some market outlets already exist and where other employment is available for rural workers. União Nordestina de Assistência a Pequenas Organizações (UNO) in Brazil is one of the very few in the sample that links rural

and urban enterprise development (for example, lace makers). UNO has an outstanding record for generating non-farm employment in rural areas not only directly, but also indirectly through supply linkages to locally made inputs.

In general, assisting non-farm activities appears to be a very important but neglected activity of rural-oriented GSOs. Evidence is accumulating that a significant share of peasant family income is now coming from sources other than farming (de Janvry et al. 1988) and that in minifundia areas, agricultural production-based programs, even if successful, may not contribute sufficiently to the household income of the poorest. As a recent evaluation of rural development programs in the northeast region of Brazil pointed out, the neglect of rural non-farm enterprise may be due to the tendency of this initiative to cut across traditional disciplines: "Those specialized in agriculture are not trained or particularly interested in non-agricultural growth matters, and those specialized in industrial development are not interested in the more rustic, dispersed, and smaller-scale forms of manufacturing associated with agricultural growth" (Tendler 1988, p. 119). On the other hand, the same study reports that the state of Ceará has changed its procurement practices, for example, by commissioning the manufacture of desks for rural schools from carpenters in rural towns (rather than sponsoring a national bidding competition, which usually resulted in purchase from the richer south). The employment effect is similar to that induced by the beekeeping program reported by FDN in Peru to manufacture beehives and other components locally.

In contrast to rural enterprise that is only indirectly linked with farm production, agroprocessing is a better understood and often favored category of rural industry. The most successful agroprocessing endeavors involve simple techniques to add value and increase output. Some of the GSOs and MSOs, especially cooperative federations, have become involved in more sophisticated agroindustrial processes, but these have succeeded only to the extent that they have been capable of adopting strict financial and business-management practices. Successful peasant managed agroprocessing enter-

Box 3.2 FUNCOL: In Defense of Indian Rights

Fundación para las Comunidades Colombianas (FUNCOL) is a GSO that has made its mark since the early 1970s in promoting the social and economic development of Colombia's Indian populations through legal assistance and, more recently, health programs. Beginning as a branch of the Asociación Colombiana Indigenista, FUNCOL has been working to foster Indian pride and self-awareness and to call national attention to problems faced by Indians, with a view toward revision of Colombian legal codes to advance Indian interests.

In its first years, FUNCOL's team of lawyers handled 829 individual cases, mostly related to land conflicts. Many of these dealt with recovery of lost tribal lands and legalization of lands currently under Indian control but threatened by encroachment. As FUNCOL's operations expanded to include populations in other geographic areas, it took on more cases involving communities, helping them in their appeals to establish *personería jurídica*, or incorporation as legally recognized entities, and in collective legal cases involving land. Although FUNCOL does not promote grassroots organizing as such, it does provide already established organizations with legal aid, thus strengthening the basis of their associations and enabling them to gain access to the government and financial system.

In 1980, FUNCOL sponsored the first national conference of Indians, in which 100 Indian leaders met under the same ceremonial pavilion for the first time in modern history. This conference laid the foundation for the Organización Nacional Indígena Colombiana, an independent national indigenous organization. Furthermore, several regional associations

of Indian groups were established as a result of this forum. FUNCOL provided each of these with the legal advice and representation needed to gain governmental recognition and begin operations.

Its activities also extend to research on and dissemination of legal issues pertaining to Indian rights as well as lobbying on the national level. In 1980, Adolfo Triana, FUNCOL's director, published *Legislación Indígena Nacional*, the first compilation of laws affecting Colombia's indigenous population. FUNCOL representatives have also been major advisers to the national government on indigenous affairs, at one point sitting on the Ministry of Government's permanent committee, which advises on all aspects of the government's relations with indigenous peoples. In addition, FUNCOL has lobbied against several large-scale development projects that would have displaced thousands of Indians and damaged the ecology in their areas.

Since 1978, FUNCOL has also supported the development of Indian populations with its health programs, providing both direct health care and training of indigenous health promoters. It has also produced a simple health manual for use by the promoters in native communities. The manual emphasizes the need to combine modern health techniques with traditional ones in order to provide the best treatment possible.

One of FUNCOL's greatest weaknesses lies in the organization's dependence on the strong leadership role played by two of its founders. Their firm guidance and political connections have led to the expansion of FUNCOL's programs and have enabled it to make a mark at the national level. Yet their domination has also created internal tensions and raised the issue of organization sustainability.

prises emerge after years of struggle and many failures. EL CEIBO in Bolivia is a remarkable example of just such a success story. After ten years of trial and error, this federation of small farmer cooperatives now collectively manages and operates a complex of cacao processing-related activities that annually makes \$1.5 million and employs over 100 peasants (see Box 3.3).

These agroprocessing enterprises also tend to do better within a sympathetic (or at least neutral) national macroenvironment, especially with regard to price policies and long-term financing. In most countries, among them Costa Rica, Mexico, and Peru, the potential for small farm-based, vertically integrated agribusiness is considerable. Still, the comparative advantage of most Latin American GSOs and MSOs that concentrate exclusively on the poorer peasant strata does not at present extend to trade-based, vertically coordinated associations of small producers. Commodity-based federations have been notably successful under private or quasi-governmental auspices. Examples are the Windward Islands Banana Growers' Association (WINBAM), Federación de Cafeteros de Colombia (FCC) in Colombian coffee, the Henequeneros Association in Yucatan, and the CLU for wool in Uruguay. (For a description of the latter, an IAF-supported organization, see Ferrin 1989.) Commodity associations are viable mainly because they are able to retain a share of revenue from marketing, processing, or shipping the products they handle.

However, most are not really GSOs and most cater to both poor and not-so-poor producers. Perhaps the cases in the study that come closest to this model are the CLU in Uruguay and one of the family of Costa Rican cooperatives that specializes in and has a quasi-monopoly over some specialty crop, such as Cooperativa Agrícola Industrial de los Productores de Chayote (COOPECHAYOTE) (Avina *et al.* 1990).

Social Community Services

The fourth rural development strategy of the GSOs and MSOs in the sample consists of providing social community service some related to basic household consumption, others to nonformal education, cultural identity, and community health.

Box 3.3 EL CEIBO: A Peasant-Led Agroprocessing Enterprise

The most remarkable example of an MSO engaged in agroprocessing activities is Centro Regional de Cooperativas Agropecuarias e Industriales (EL CEIBO), a second-level cooperative federation operating in the Alto Beni region of Bolivia. By 1986, with thirty-five affiliated cooperatives with a combined membership of 850 peasants, EL CEIBO controlled a transport division with ten twelve-ton trucks and four pickups, an agricultural extension/popular education division providing services to some 500 small farmers, business offices and rudimentary processing plants in two separate locations, and two medium-sized factories that manufacture cocoa, chocolate, and cocoa butter. This impressive complex of activities employed over 100 peasants and provided services and economic benefits to thousands of small-farm families (Healy 1988).

Yet EL CEIBO's integrated marketing operation did not coalesce overnight or without financial, administrative, and other problems related to Bolivia's macroeconomic crisis. It was the federation's flexible, participatory management style and access to external funding sources that enabled it to recognize and effectively respond to member needs and organizational opportunities as they arose. An IAF grant to cover operating expenses and the purchase of a large truck, for example, allowed EL CEIBO to use its new capacity to garner control of 60 to 70 % of the cocoa beans transported between the Alto Beni and La Paz, and thus to become chief price regulator in the region. A later IAF grant to finance the purchase of a second-hand factory enabled EL CEIBO to further diversify its production potential and explore new markets. The success of this plant inspired the rental of a second. When cacao production declined because of the

spread of a disease of the cacao tree, the federation formed COPROAGRO, its agricultural extension/education division, to disseminate techniques to combat the disease as well as to assist in other agricultural and organizational improvements. EL CEIBO's ability to undertake and integrate new ventures has been a significant factor in the formation of its agroprocessing enterprise.

One of the keys to EL CEIBO's success has been its highly participatory style. The membership of its administrative council changes at frequent regular intervals and, within the council, responsibility for the various divisions of the enterprise is widely shared. This gives cooperative farmers lots of opportunities to participate in administration and decision-making. To avoid discontinuity in operations, new council members undergo a period of apprenticeship during which they learn by sharing in administrative duties. Three times a year, the general assembly of cooperative delegates meets for three days to discuss problems, solutions, and strategies. Broad participation is further bolstered by yearly turnover in the personnel of the Sapecho offices and processing plant as well as COPROACRO paraprofessionals. All employees, except those in the transport division, are recommended by their respective cooperatives and receive equal wages. Through these and other innovative mechanisms, members are able to participate in and collectively control the development of their enterprise, and thus their livelihoods.

A popular community service is to operate a village store that sells household staples. Several GSOs and MSOs from among the thirty are running such stores, although it is not their main activity. For example, the agricultural input store in Puriscal, Costa Rica, also sells consumer items. Experience has shown that village retail stores have a high failure rate, even when a central umbrella organization buys stocks in bulk.³ Furthermore, consumer stores, unlike farm input supply stores, have few beneficial linkages to other rural income and employment enterprises and therefore produce little in the way of spillover benefits. Typically, to achieve a sufficient volume of business, consumer stores attempt to diversify both their merchandise and their clientele.

Virtually all of the organizations discussed in this study have educational/training components in their programs, but only a few—mostly church-inspired organizations—consider themselves educational specialists (UNIDAD, CIDE, CAPS, CIPCA, FIDENE). Both “popular” and “nonformal” approaches are used, most often in tandem. In popular education, which grew out of the Paolo Freire tradition, learning is linked to consciousness-raising about one’s social situation and the forces that limit or facilitate the development of human potential. Freire’s *Pedagogy of the Oppressed* (1970) has been used extensively as a starting point for many social-activist GSOs, most of which have gradually moved beyond it. Nonformal education refers to training outside the formal school systems in literacy, numeracy, bilingual communication, and other practical skills, commonly conducted in conjunction with productive activities. Like popular education, the nonformal approach often seeks to stimulate critical thinking, cultivate alternative visions, and, ultimately, transform society (Shifter 1984).

Tracing the effects of popular education remains elusive. For Lehmann, the key concept is “communicative competence.” Reviewing the experience of popular education in Chile, he writes:

“Such activities open up a space in which individuals can become persons, in which a “climate of affect and respect” reigns, in which participants acquire a vocabulary of compe-

tent and skilled social interaction enabling them to regard themselves and each other as citizens, as equals, rather than, by implication, as dependent and interstitial operators". (Lchmann 1990)

The popular education approach is practiced by UNIDAD, previously noted for its Bread for Education program. UNIDAD uses *Ferias Educativas* as its entry point into Indian communities. In these *ferias*, teams of musicians, incorporating traditional songs and dances, present sociodramas, which raise social issues in the context of Indian values and culture and encourage the local villagers to be proud of their culture, to assert their rights, and to develop practical solutions to their problems. From this point, UNIDAD expands its involvement into other areas, including nonformal education programs such as literacy training and skills training for income-generating projects (see Box 3.4).

In some cases, tensions between the two approaches arise as popular education programs become more technical and skills oriented. An illustrative example is the case of Centro de Investigación y Desarrollo de la Educación (CIDE) in Chile (see the profile in Chapter 13). In the early 1970s, CIDE was highly influenced by Freire's popular education ideal and adopted the "horizontal model," a participatory learning methodology that drew heavily on the resources and daily experiences of low income groups. In 1974, CIDE launched the pilot Programa Padres e Hijos, which sought to apply this new methodology by encouraging families to deal with problems such as alcoholism and nutrition. Also, through simulation games, booklets, and participatory exercises, families were taught to tend to the social and educational needs of preschool children. The following year, CIDE began incorporating more technical, or "harder," materials in its action programs to boost the skills of base-group participants. But as the subject matter became more technical, the effectiveness of the participatory learning process came under scrutiny. For example, in CIDE's Educación Campesina program, an integrated community development effort that included the study of gardens, trees, and animals, many questions came up that could not be adequately answered within the group itself. Base-group participants

Box 3.4 UNIDAD: Education, Cultural Revival, and Livelihood

How education can be enlisted in the service of cultural reaffirmation and community-based income enhancement is demonstrated by the story of Unidad de Educación para el Desarrollo de Chimborazo (UNIDAD). This Ecuadorian GSO has a unique approach to building the capacity of the Quechua Indian populations to take pride in their identity and to promote their own socioeconomic development. Using its *Ferias educación, musical and dramatic presentations dealing with social and cultural themes, as a point of entry into the indigenous communities, UNIDAD encourages existing organizations to get involved in literacy programs, community development projects, and income-generating activities.*

UNIDAD is interesting not only because of its sequence of services, but also for its unique straddling of the public and private realms. Founded in 1978 by the Ecuadorian Ministry of Education and Culture as a regional unit to promote the literacy of the Quechua people, UNIDAD has developed methodologies in education, training, and community development that have come to be adopted nationwide by various ministries and by the Instituto de Cooperativas Ecuatorianas. When the government changed in 1984, however, UNIDAD fell out of favor with the conservative administration. It was resurrected by UNIDAD's staff, comprised primarily of Indians who have roots in the areas served, as an NGO under the name of the Servicio Ecuatoriano de Voluntarios - Chimborazo. Now under a more sympathetic administration, the ministry's program once again features the old UNIDAD approach, and the public and NGO functions may merge again. In the meantime,

the capacity of the Indian communities themselves has been built up so that a network of representative organizations is emerging in the region that can carry out part of the work of the original "outsider" institution.

UNIDAD's efforts initially focused on educational activities. Its programs included adult literacy, training of bilingual teachers in primary schools, technical training for promoters in Indian communities, publication of a newsletter and a biweekly supplement, preparation of bilingual texts for use in primary schools, and the previously mentioned Ferris Educativas. These programs sought not only to build the Indians' capacity to function more effectively within a bilingual society, but also to encourage the villagers to be proud of their culture and to assert their rights.

In response to the need expressed by these communities for economic empowerment, UNIDAD developed a set of programs including communal bakeries and handicraft production workshops to improve their income-generating capacity. The artisan workshops employ craftspeople, an administrator, and sales agent, and also offer technical training for those wishing to engage in craft design. Although these economic programs have been popular and clearly fill local needs, there has been little success in having them taken over by the communities on a sustainable basis.

Perhaps the most potentially significant spin-off of UNIDAD's activities is the generation of horizontal links among the Indian villages. From these informal links have emerged five regional federations of Indian communities, which, with UNIDAD's brokerage and support, have become eligible for direct grants from the IAF and other assistance from national agencies.

not only demanded greater technical expertise, but also called for more formal instruction in these matters, the latter representing a departure from CIDE's approach. Although the popular and more technical approaches are not entirely incompatible, some compromise may be necessary.

Evaluating the impact of rural education services is not as clear-cut as evaluating agricultural diversification projects. Shifter, in his 1984 evaluation of CIDE's programs, notes that there is some controversy over whether these services should be judged for their palpable benefits, such as literacy or increases in income and productivity, or for less tangible effects, such as heightened awareness and self-confidence. Although some education services show clear, direct results, such as literacy, numeracy, increased frequency of listening to radio programs, or learning a new skill such as farm machinery repair, evidence of more far-reaching impact is generally lacking.

A large number of social-activist organizations among the thirty employ some variation of the community development approach to rural development (reviewed by Alliband 1983; Midgley 1986), in which the educational process is designed around "mobilization," or the identification and implementation of relatively simple tasks of common interest, usually with considerable voluntary labor contributions by members. The rural community development movement, which had its heyday during the 1960s, was inspired by external aid agencies and spearheaded by village-level community development social mobilizers. The movement was subsequently criticized, mainly because it had no economic/productive core and no linkages to social/structural change and because it was accused of creating new forms of dependency (Holdcrof 1978). The more militant and reform-minded consciousness-raising efforts were put forward precisely to promote social/structural change. Economic linkage is now a standard feature of GSO/MSO strategies.

Several of the thirty GSOs and MSOs studied have provided health-related rural community services, primarily as adjuncts to other programs (CIPCA, USEMI, APCOB). Their experience suggests

that regional federations of local health committees can be very effective in holding the public health establishment more accountable for community needs. In Panama, for example, a minister of health sympathetic to community involvement in public health services spearheaded the establishment of regional health federations whose leaders were accountable to the local committees in their districts. These federations created two kinds of linkages: vertical between health committees and health officials and horizontal among the committees themselves. First and foremost the federations functioned as a bridge between the health committees and regional or local public health authorities to solve community health problems. They were also instrumental in shifting the system's attention from curative to preventive health services. According to a study carried out by La Forgia, three-fourths of the petitions dealt with by the federations involved preventive health (aqueduct/well construction, latrines/ septic tanks, sanitary inspectors, and so on). Significantly, the federations also provided financial and technical assistance to communities for such things as well-drilling equipment or burned-out water pumps (La Forgia 1987; see also a broader report on the Panama health committees, La Forgia 1985). The Panama case is one of the very few instances in which a second-tier health-care user group was formed into a federation, a sort of MSO. Normally a GSO works with a number of local community health committees. (For a summary of the extensive experience in the field of primary health care through community action, see Martin 1983).

Problems in Evaluating Service Delivery

One might think that evaluating service delivery is a relatively straightforward process when compared with the complications of assessing performance in less tangible dimensions. But this is not really true, because providing a service is just the starting point in a chain of events that should ultimately end in an increase in the well-being of users. Most of the indicators of successful service provision refer to some intermediate point in the chain of events, generally when the service is placed within reach of the beneficiaries, or "delivered." Judgments on performance are based on the suitability

and utility of the service to the users' situations and on the speed or frequency of actual use, rather than on the resultant changes in their well-being.

In the economic realm, the effective delivery of services should ultimately result in an increase in income. Still, it is hard to attribute changes in income to specific interventions. Moreover, GSOs and MSOs do not collect the information needed to track changes in income, and most donors, including the IAF, do not request it or help to collect it. In addition, if the GSO or MSO were to put an adequate evaluation system in place, it would have to expend much of its resources on research and experimentation in the early project stages when benefits have not yet materialized.

Another problem in evaluating service delivery is the sequencing issue, in which experience building and trying out new approaches (which by themselves may appear unfruitful) lay the foundation for future positive achievements. The payoff on intimate knowledge of the local reality is the ability of intermediary organizations to launch or support successful diversification projects in which different income and employment sources complement one another. The need for GSOs and MSOs to spend time and money in an area to acquire local knowledge and credibility means a heavy investment in staff and beneficiary relations. Most donors, as will be illustrated later, are reluctant to support longer-term "up-front" investments with longer expected payoff periods.

In the search for effective income-producing projects, there may be a number of failures or wrong moves. Such projects are usually selected on the basis of trials by the organization's staff without adequate study and consultation (Before ANAI's excellent agroforestry program, it failed in fish farming; before URCOOPAPA's profitable vegetable marketing scheme, it failed with a potato-washing operation.) In fact, a number of failures seems to be a prerequisite to finding something that clicks. These historic failures and learning experiments are seldom documented.

It is often extremely difficult to evaluate the benefits of vaguely defined activities. This poses a particularly severe problem in credit services, a common feature of market-oriented strategies, in which use of the loan funds is not designated. One explanation for the success of CSO/MSO-administered credit is precisely the relative lack of specificity and control over loan funds compared to that exercised by official agencies and banks. Typically, such credit is granted on the basis of the borrower's character, usually vouchsafed by a local solidarity group (*convenio moral*). In such cases it often does not matter what the funds are used for in the short run, as long as the productive goals of the project are ultimately fulfilled and repayment is made. But although a high repayment rate is a good indication of uptake, it is only a proxy for an enhanced income stream.

In this respect GSO/MSO credit systems resemble very much the operation of private moneylenders. In general, the success of the credit function of GSOs and MSOs, as in marketing, is not in the service itself, but in the linking of beneficiaries to other sources. Because donor funds for credit are strictly limited, these projects cannot possibly replace regular credit sources, as is sometimes implied in evaluations of microenterprises. GSOs and MSOs should be evaluated for their ability to bring new methods into the system (especially in reducing transaction costs), raise their beneficiaries' capacity to work with credit, and act as a catalyst between poor clients and regular sources of loans. The creation of solidarity credit groups is now seen in the development literature as an important means of overcoming the costly and risky information problem faced by lenders (Hoff and Stiglitz 1990). A small credit group that is liable for the debts of each member has incentives to undertake the burden of selection, monitoring, and enforcement that would otherwise fall on the lending institution.

In the productive realm, as alluded to before, effectiveness is associated with a microsystems approach in which key elements of an interlocking production or marketing system are tackled. It is, of course, not feasible for a small private organization to get directly involved in all important elements of the system, although there are

good examples of two-or three-pronged operations. PROTERRA works on land titles and agricultural extension, CIPCA on irrigation and farm machinery, and INDES on both marketing and credit. Note that these "prongs" are not in separate projects but within the same project. Several GSOs and MSOs combine technology, credit, and marketing. The tendency to bring everything under the control of one agency or project has been the bane of official integrated rural development programs. Successful organizations do not have to manage the whole system, but they understand it and are able to influence those components they do not directly control. "Smart" GSOs know how to link their beneficiaries to needed services that they cannot provide themselves. ANAI's decision not to expand into marketing the specialty crops it had introduced was a wise one, but the organization made sure that the nursery groups it sponsored got the proper advice.

The discussion of the service function of GSOs and MSOs brings out very clearly the ambiguous but intriguing position of these organizations, which operate somewhere between the state and the market. Their work appears to be a response to both bureaucratic and market failure to serve the poor.

Although the market is driven by demand, state service organizations are generally driven by supply; they try to induce clients to consume what is judged to be good for them. The cases in this study demonstrate that poverty-reduction efforts would be greatly enhanced if they were energized more by demand rather than by supply (Salmen 1990).

The services provided by the highly rated intermediaries are effective because they fit well into the particular situation of the beneficiaries and are demand driven, even if the process is not initiated from below. GSOs and MSOs are able to develop cost-effective solutions to specific problems as yet unperceived by the poor, to articulate demands, and to expand the scope of choice.

The most bothersome issue for these organizations is finding a way to turn a successful delivery system into a sustainable develop-

ment process, given the impermanence and limitations of NGO funding. The "projectized" form of donor financing virtually mandates that by the end of the project period the service provided should (1) no longer be required, (2) be turned over for routine continuation to other institutions, or (3) be performed, at least in part, by the beneficiaries themselves. During the time that the GSO and MSO carries out the project, something "developmental" is supposed to happen, with the intermediary organization that provided the services serving as a catalyst.

Some of the more sustainable or permanent outcomes associated with service delivery have been highlighted in this chapter, such as the establishment of useful linkages between beneficiary groups and technical and financial resource or the institutionalization of agribusiness activities. However, most of the other developmental aspects for which the service function is a catalyst are dealt with in later chapters.

This leads to the more general conclusion that while service delivery has a strong intrinsic value, it should really be evaluated on the basis of its instrumental value as a catalyst for other developmental changes.

Notes

1. This was also one of the conclusions of Lynn Gilleland's study of 179 marketing projects carried out by IAF grantees. She writes:

Agricultural marketing components are often tacked onto a project in order to ensure its grant approval... There is also a belief that agricultural marketing will take care itself and is a passive partner in production. (Gilleland 1988, p.III-1)

- 2- The strengths and weaknesses of community stores are reported in detail by Flora and Flora (1985)

ORGANIZATIONAL ATTRIBUTES OF STRONG PERFORMERS

T. F. Carroll

■ In the previous five chapters the performance of the thirty GSOs and MSOs was examined by applying the criteria established at the beginning of this book. These discussions often alluded to the internal strengths and weaknesses of the different kinds of intermediaries and how capacity at the grassroots is developed. Moving back to take a wider view, this chapter considers the capacity of the support organizations themselves as a entity.

All thirty of the cases rate high in some respect, as mentioned earlier. But about a third rated high in all three major dimensions (service delivery, participation, and wider impact, which are actually three pairs of criteria). Another third rated significantly high in two of these dimensions. What organizational features are associated with good overall performance?

An answer to this question may be found by ascertaining whether correlations exist among the six disaggregated performance characteristics employed in the analysis (service delivery, poverty reach, participation, group capacity building, innovation, and policy impact), by testing a number of orga-

nizational features that might be related to performance, and by attempting an analysis of the dynamics of performance (that is, how performance is affected by change over time).

Correlations

Looking for associations among the six characteristics is important because positive associations suggest that more than one desirable outcome can be achieved simultaneously or even that progress in one direction can reinforce progress in another. Conversely, negative associations indicate the likelihood of a trade-off, suggesting that certain results can be achieved only by neglecting other desirable outcomes, or even that to be a good performer in one direction means heavier costs in other areas.

Table 8.1 shows the correlations encountered among the characteristics. The sample is not random enough and the numbers in each category are too small to provide a rigorous statistical test of correlation. Nevertheless, there are some interesting patterns.

Our confidence in these patterns was reinforced by analysis of data from Peru, in which the ratings of forty-two intermediary NGOs exhibited very similar associations (Humphreys, Carroll and Scurrah 1988).

Notable are the unexpectedly strong relationships between participation and poverty reach and between service delivery and participation. The latter refutes the notion that organizations that devote a lot of energy to fostering beneficiary participation cannot provide services as effectively as those that do not and confirms a basic tenet of the Inter-American Foundation (IAF): The involvement of the poor in all phases of development activities and their sense of ownership of the development process are essential elements in the appropriateness, fit, implementation, and eventual sustainability of activities undertaken by NGOs. Assuming the right direction of causality, it also seems to confirm a central hypothesis of this study: Delivering beneficial services can be a prerequisite to eliciting participation where little or no collective experience exists. This is especially true

Table 8.1 Correlations among the performance indicators.

Service Delivery	Poverty Reach	Participation	Capacity Building	Innovation	Policy Impact
Service Delivery	Medium	Very high**	Medium	High*	Low
Poverty Reach		Very high**	Medium	Medium	Low
Participation			High*	Medium	Low
Capacity Building				Low	Low
Innovation					Very high**
Policy Impact					

Product-moment correlations (n) were used

* Significant at .05 level

** Highly significant at 0.1 level

if beneficiaries voluntarily contribute time and labor. It is also not surprising that there is a high association between participation and capacity building. The two concepts are closely related and normally go together as traits of GSOs and MSOs. As already discussed, a participatory style is a necessary, but not sufficient, precondition for capacity building.

Less predictable is the very strong synergy between participation and poverty reach. This suggests either that the poorer target populations are relatively more "organizable," perhaps because of their traditional village or ethnic cohesion, or that those intermediaries that prefer to work with the relatively poorer groups are by their very nature more participatory.

It is also interesting that service delivery is associated to some extent with all the other indicators except policy impact. This once again appears to confirm this study's findings that if GSOs or MSOs

are not good at generating concrete economic and social benefits, they cannot hope to achieve other aims which are often more complex and distant. Or, looking at it another way, there is less conflict than some critics have alleged between the bread-and-butter types of basic services and the loftier aims espoused by the IAF and many other donors.

Conflict, or trade-off, becomes more evident, however, if one disaggregates organizations that see their mission mainly as service delivery rather than capacity building or empowerment. These are the classic service-provider GSOs and MSOs. Twelve in the sample fall into this category. Four are “retailers,” four are “aggregators,” and four are “advocates,” according to the modified typology presented in Chapter 6 (Figure 6.1). All twelve exhibit a negative association between service delivery and group capacity building, and the eight that make up the aggregators and retailers together also show a negative-though not as strong-correlation between service and poverty. (The four advocates all received top ratings in both service delivery and poverty reach.) What this means is that the organizations in the sample fall into two contrasting groups based on the importance they place on the service function. About 40% see their main mission as serving the base, and the remaining 60% consider service as a means to other goals.

The low association between policy impact and all the other characteristics (except its twin, innovation) simply means that scaling up and policy influence are more independent than the other variables. This could mean that policy impact hinges more on special characteristics such as leadership, vision, or government receptivity than on traits that contribute to effective service delivery. As discussed in Chapter 2, the GSOs and MSOs were rated rather low on actual policy impact, but the ratings improved for potential policy impact. This analysis leads to the hypothesis that many kinds of GSOs and MSOs (perhaps more than one would have thought) are capable of making a wider impact and are not actually fettered by the microlimitations generally attributed to them by their admirers and critics alike.

Organizational Features of Performance

This section, which examines a number of organizational features such as size, level of formality, relationships with governmental entities, and so on, is based not only on the thirty cases in this study but also on the results of a Peruvian GSO study that examined forty-two intermediaries (Humphreys, Carroll, and Scurrah 1988).

It must be pointed out that GSOs as a group significantly outperform MSOs, as confirmed by the ratings presented in Chapter 2. This is rather paradoxical. Although consensual decision-making and accountability to the base membership are conceptually the strong points of MSOs, in most of our cases these advantages did not translate into solid organizational effectiveness. The very formality of the MSOs in the sample as well as their origin in and control by state agencies have made them more bureaucratic, hierarchical, and inflexible than GSOs. Most of the MSOs can be thought of as having 'low-trust' interpersonal relations. A low-trust organization is characterized by expectations of reciprocity through a precisely balanced exchange in the short run, careful calculations of costs and anticipated benefits of any concessions, and minimal dependency on the others' discretion, with a resulting tendency for suspicion and the invoking of sanctions against default of obligations (Galjart 1982). GSOs, on the other hand, are characterized by "high-trust" relationships in which members share strongly held values, bear toward one another a diffuse sense of long-term obligation, offer one another spontaneous support without calculation of costs or anticipated benefits, communicate freely and honestly, and give one another the benefit of any doubt that may arise with respect to goodwill or motivation.

Regarding formal versus informal beneficiary participation in decision-making and operations, the interviews indicated that high-scoring GSOs valued beneficiary influence on their decision-making processes. Yet the cases show that formal representation by beneficiaries on a GSO's own governing board did not improve performance; an informal participatory style was more effective. It is clear that an open, collegial management style, which builds confidence and trust

among beneficiaries and support organizations, is a key organizational quality. In the sample of CSOs, beneficiary participation in and of itself did not seem to be essential to effective service delivery or policy impact, but it is probably fair to say that the sustainability of service flows and the ability to take advantage of improved policies depends highly on beneficiary involvement and improved capacity at the grassroots level.

Features Unrelated to Performance

Some organizational features seemed to have little, if any, impact on GSO or MSO performance. Size, in terms of number of staff, is one example. Smaller organizations, such as SADECSA and ANTISUYO with fewer than ten staff members, performed as well as or better than some of the largest, such as CIPCA or FMDR with over a hundred staff members.

Private-sector linkages also proved to be only weakly associated with performance ratings. This apparent lack of connection with the business world reflects, on the one hand, the public-service orientation of most GSOs and MSOs and, on the other, the competition that cooperatives and microenterprises represent to established business interests.

In contrast, relationships with other nongovernmental agencies, national and regional, served to enhance the impact of the efforts of GSOs and MSOs. Those that were members of NGO associations or networks outperformed those that had little or no relation with other NGOs.

Organizational Strategies and Approaches

Turning to organizational features that appear to contribute to strong performance, the degree of organization of beneficiary groups proved to be important. GSOs and MSOs performed better when dealing with more or less structured client groups than with unorga-

nized ones. The exception are organizations serving land reform collectives in Peru and Chile. Still, there is a question about the direction of causality: Is the relative organizational level of beneficiaries a precondition or a result of the GSO's group capacity building?

The findings of this study indicate that organizations implementing a limited number of tightly connected projects performed better than those undertaking loosely connected or unconnected clusters of projects. The synergy created by closely related project interventions enhances the overall impact of GSO and MSO efforts.

Similarly, the cases show that a well-defined territorial scope generates better results than a spatially dispersed structure. The "region" in question varies in size: It can range from a couple of provinces in north-eastern Argentina (INDES) to a relatively circumscribed river valley on the Peruvian coast (PROTERRA), but it always means a geographic or territorial unit with certain unifying features within which GSO or MSO programs can assume the necessary coherence, relevance, and potential scale. Generally, such a regional space coincides or is part of an administrative or political unit as well, which gives the organizations opportunities to tap into regional public and private networks and even to mobilize regional pressure on national authorities. The strength of these linkages and the decentralization of authority correlate closely to performance. Those GSOs and MSOs that have regular contacts and collaboration with ministries, universities, and other government agencies, especially at the regional or decentralized levels, scored higher in performance than did those with tenuous or no contact with the public sector.

A GSO's perception of the role of external donor funding is also associated with its overall level of effectiveness. The better performers preferred institutional rather than specific project financing. They also preferred that funds be employed to deepen and extend already existing services rather than to initiate new activities, as the weaker performers did.

In general, the findings lend support to the hypothesis that the best institutional model for intermediary organizations in inegalitarian

settings entails vertical extension of key functions supported by brokerage roles that facilitate horizontal cooperation (Peterson 1982).

Financial Health

A solid financial position is a basic requisite of good performance for GSOs and MSOs. What are the elements of financial health in intermediary NGOs? For GSOs it means having a diversified portfolio of donor resources assuring a steady flow of funds, especially for core costs. GSOs that are partially enterprises must generate enough income through revenues to cover operating expenses plus, strictly speaking, amortization and depreciation.

The same applies to MSOs, which in the sample are all cooperative style quasi-businesses. Centro Agrícola Cantonal de Hojanca (CACH), which runs its operations as a business service, was at the time of the field survey 70 % self-sufficient. But this unusually high degree of cost recovery comes at a price: Most of CACH's services are unaffordable by the region's poorer households. For example, the average cost of planting one hectare with valuable tree species is around \$500. Almost half the farmers in the area cannot afford to make an investment that will not yield cash returns for a number of years.

MSOs that also engage in social services whose cost cannot be directly recovered (such as the Costa Rican cooperative unions) may be able to cross-subsidize if the revenues from the business end are sufficiently buoyant, but in most cases there is some subsidy from outside public or private sources. Socially oriented business, like cooperatives, are under constant tension between their profitmaking and equity-promoting selves. This schizophrenia has been eloquently analyzed by Tandler (1983b). According to Tandler, co-op federations are essentially businesses with an exclusive membership. The fact that they often benefit poorer members or even non-members is explained partly by the social norms that co-op leaders must respect or by the co-ops' need to obtain supplies from (or sell to) a much wider clientele than its membership (spillover benefits). In neither case is altruistic motivation involved.

At any rate, what matters most in the case of these MSOs is financial viability without too great a grant element. If this cannot be achieved, the organization is in trouble. Its capacity to offer services to the members is seriously impaired and it may go bankrupt, as happened with many of the Peruvian and some of the Costa Rican cooperatives.

Several older cooperatives that have survived rough times still labor under the burden of huge past debts, even if their current books are balanced. These co-op debts are as much the fault of the lenders as the borrowers and can be retired only if the lenders bear the lion's share of the losses.

To be sure, the financial health of MSOs is not only a function of their own management but is significantly affected by external factors, such as price or trade policies, the severity of competition, and so on. There can also be a favorable external environment, as in Costa Rica, where co-ops are given various kinds of preferential treatment and subsidies. However, the state not only supports, it also frequently meddles. So an organization may not be to blame for financial problems when the state withdraws previous concessions or restricts the freedom of MSOs to maneuver and manage themselves. If the state regards co-ops as a socially desirable form of organization, it needs to offer sensitive, sustained support of the same sort described in previous chapters as the basis for sound GSO-MSO relationships. Perhaps Uruguay, where IPRU and its spin-offs have enjoyed this sort of environment is a good illustration of a healthy situation, where support is extended without coddling or domination.

To be financially sound, GSOs must at a minimum be able to cover their core costs. However, it is not clear what should be considered core costs. ANAI maintains an experimental forest plantation and nursery; some GSOs have radio stations. Are the costs of running these things to be counted as core? What about long-term commitments, such as debt service? In this discussion, core costs are limited to the salaries of management (board members are usually volunteers) and a few essential technical and administrative staff and the costs of running the central office. In the sample, these core costs averaged about one-fifth of the total annual expenditure. In small

organizations like SADECSA or ANAI, core costs may go as high as one-third; in large ones with extensive field programs such as UNO or FMDR, they may be as low as one-tenth.

Most donor assistance goes to finance projects-which means the cost of new activities. In the development business, this is commonly called the additionally principle and is derived from the way external aid agencies extend project funding to government. In such transactions the aid agency assumes (often erroneously) that salaries and other recurrent expenditures will continue to be paid from regular government budgeted. Some agencies may insist that such budgets be increased and specifically earmarked for the project they are funding. This serves to demonstrate to their governing boards that the aid contributions are truly additional.

Most donors to NGOs are reluctant to cover any of the core costs related to the project they finance; they hope that someone else will pick up these costs. They fear that adding core expenses will make service delivery less cost-efficient, and they do not want to leave themselves open to the criticism that too few of their aid dollars are actually reaching the poor. As discussed earlier, this attitude is self-defeating and turns out to be false economy. Someone has to bear the full costs of service delivery. The promotional and developmental costs of innovations, linkages, and capacity building-all desired by donors are seldom included in project budgets. Highly regarded intermediaries excel precisely in these aspects.

Donors often fail to appreciate the more mundane but essential cost of the project cycle: adequate planning, preinvestment work, program management, and supervision. Intermediaries are seldom given the resources to perform these functions that are so essential for successful project outcomes. Donors are sometimes under the illusion that they themselves can perform these functions. (The realization that much of the preproject work and the supervision cannot be carried out from Washington has prompted the Inter-American Foundation to institute an in-country support service capacity.)

It is somewhat curious that none of these scruples about core costs seem to apply to consulting firms (or even to "NGO contractors"), through which much of the development business is conducted (Brown and Korten 1989). Such contractors are accustomed to receive substantial overhead fees in addition to actual salaries and other project costs, often amounting to a three- or fourfold multiplier of the salary component.

Uncertainty over core funds impairs the capacity of intermediary organizations. In the sample, multiyear assurance of core staff salaries is closely related to overall performance. For example, a significant portion of the salaries for CIPCA's top management is assured through either the Jesuit Order or the Ministry of Education. In FIDENE, the local university pays for a number of the professionals who devote the major part of their time to FIDENE's action program. If there is uncertainty about where these funds will come from, leaders (especially of GSOs) have to spend too much time raising funds and writing proposals and have difficulty retaining their key staff members. Worse yet, these leaders are forced to take on personal consultancies or business obligations, which further cuts into the time and energy they can devote to their own organizations.

Motivation and Leadership

The question of whether it is better to have a competent staff or a committed staff was discussed previously, and it was concluded that both are essential. It was also documented that this improbable combination has actually been achieved by a good number of the highly rated intermediary organizations and that these attributes may be acquired in any order. However, the motivation one observes in the best intermediary organizations, especially at the field operation level, cannot be explained by either competence or commitment. The staff salaries paid by GSOs and MSOs do not differ much from government pay scales and are less than those prevailing in the private business sector; job security is low; fringe benefits are thin or absent; the hours are long and working conditions in the interior are often rough. Why do the staffs of these organizations work so hard?

Why is sensitive, helpful behavior toward the poor a norm rather than an exception?

Beyond recruitment practices that are more selective (and self-selective) than elsewhere, a large part of the answer lies in the socialization of the staffs. A pervading sense of mission is widely diffused throughout each organization so that behavior consistent with the guiding vision, although not necessarily codified in established guidelines, is constantly reinforced. Uphoff (1992) has called such behavior a manifestation of "social energy" in an elaboration of Hirschman's (1984) original formulation, and has identified its components as "ideals, ideas, and friendship," each producing a positive sum output. It should be pointed out that such mutually reinforcing relationships exist not only among the staff but also between the staff and the beneficiaries. Job satisfaction is maximized when the work of the staff is appreciated and when staff members enjoy a good reputation among their clients. The sense of self-worth of the cadre is also enhanced by the considerable freedom given to them in the field, a freedom that carries with it an increased sense of responsibility. Speaking of his relationship with generally suspicious native communities, a promotor in southern Chile said, "I have their trust [confianza], even if we disagree and I must tell them things they do not want to hear."

The internal organization of virtually all the GSOs and MSOs is less hierarchical and more collegial than one encounters in government and business. Social distances are minimized and the usual bureaucratic culture of "salute the seniors and boss the juniors" gives way to a more interactive and informal style. Loyalty is based less on the usual forms of reciprocity (expecting and dispensing favors) and more on shared values and a sense of purpose articulated by the leaders.

These feelings of loyalty are put to the test when there is a change in leadership or when a split appears at the top. When Tejada, the charismatic leader of CEDECUM in Puno, Peru, had a row with his Lima based, more conservative board-member colleagues, the rank and file of the staff backed him up. When he was finally forced out, much of CEDECUM's staff resigned in protest. A continual internal

debate about means and ends is healthy, but an ideological split can cause serious problems. In some of FMDR's regional divisions in Mexico, the Held agents or *promotores* have become gradually more radicalized in the sense of identifying with the poorer peasantry and more vocal *campesino* organizations. This has brought the agents into conflict with the FMDR's more conservative businessmen directors. PURISCAL in Costa Rica embodies two visions, a hard-line economic orientation and a "soft" community development perspective. The effectiveness of these organizations, as long as they remain torn into different directions, is impaired. If internal divisions over ideology or strategy become too acute, the intermediary organization may divide into more homogeneous parts. It was observed that although such a split may cause temporary setbacks, it is eventually a healthy development. It consolidates shared values and loyalty in each of the successor groups around the new constellation of leaders. It may also allow each successor organization to focus on a unitary task.

The idea that strong leadership is linked to higher overall performance is controversial within the IAF and elsewhere, where GSOs or MSOs led by dominant individuals are viewed with some concern about internal democracy and external give-and-take. Yet the evidence clearly points to the importance of inspired central leadership, at least in the early years of an organization's establishment and consolidation. In this process, the main leader need not be the founder; sometimes the second or third leader becomes the key. What is needed is a strong personality with enough commitment and drive to give the organization a central focus and, equally important, external legitimacy and alliances. These traits help an organization overcome crises and weather adversities, experiences that eventually help make a GSO or MSO a good general performer.

Innovation is often a function of experienced and imaginative leadership. Strong central leaders and managers or a small team of ideologically committed professionals appear to have played an important role in the establishment and later development of the sample GSOs and MSOs. However, in some organizations, lack of

depth of leadership creates an ongoing problem of orderly succession and continuity.

Innovation requires an organization to live with uncertainty and take risks, to engage in long-term planning, and to consider the possibility of failure at least initially as a learning experience. Some routine, specialized organizations have been known to transform themselves into innovative ones. It is interesting to compare two national development foundations, FMDR in Mexico and FDN in the Dominican Republic (this FDN is not one of the thirty cases). The former has continued with its original functions, but the latter has been able to diversify and spin off several promising affiliates.

Organizational Dilemmas

One of the most salient issues that emerges from this book is that, in an ambiance pervaded by ambiguity and tension, the thirty organizations in the sample seem to have succeeded in managing inherent conflict or bringing their main opposing forces into a workable equilibrium. Some of these conflicts are well documented in evaluations of IAF intermediaries. Studies of FUNDE (Tendler et al. 1984), FMDR (Diskin et al. 1987),

UNO (Tendler 1983a), IPRU-INDES (Martinez-Nogeira 1984), and five women's organizations (Yudelman 1987) describe features of each organization that allow positive and negative elements to coexist. These retrospective, after-the-fact assessments had a longer time frame than was available to the authors of *They Know How* (IAF 1976), the IAF's earlier attempt at self-evaluation and articulation of its mission. The assessments clearly show that the organizations face not only numerous internal tensions in setting and carrying out their purposes but also dilemmas inherent in their relationship with the outside world—their clients and donors.

As mentioned earlier, many intermediaries have difficulty trying to balance their roles as generalists versus specialists.⁴ Generalist

GSOs and MSOs try to respond to the multiple needs of their beneficiaries. This is especially true of those intermediaries that have a regional scope or those operating in areas where the coverage of government services is very thin (such as CIPCA in northern Peru or FIDENE in southwestern Brazil). Specialized intermediaries focus their attention on distinct service sectors but tend to neglect organizational strengthening and capacity building.

It is preferable for intermediaries to have a clearly defined central focus around which several types of activities can be clustered and gradually to acquire specialized professional competence in some fields (for example, communications or commodity processing). However, gaining such professional competence may become a problem if highly trained but poorly socialized staffs need to be integrated into the organization. Such professionals also have many alternative, better remunerated opportunities and are less likely to forgo the rewards associated with their skills.

MSOs that arise as a result of the alliance or federation of primary groups face different dilemmas. They can act as a secretariat for coordination or lobbying, they can offer technical or financial services to their members, or they can become implementers and operators of programs at a level where economies of scale are favorable. Each role offers certain advantages and disadvantages. Restrictions on how much highly trained professionals can be paid are even more strict for MSOs than for GSOs. Volunteer MSO board members (who represent base member organizations and are not high-status outsiders like those that might be found on GSO boards) and assemblies are reluctant to approve compensation levels for hired managers and technicians that are too far above their own standards.

One of the inherent problems of all intermediary organizations (and perhaps all NGOs) is the long-term career development of their staffs. The strong appeal of a shared mission, described earlier, is likely to weaken eventually, with job security and career advancement plus family-related motivations pulling people in other directions. Managing staff turnover and socializing new recruits are problems experienced by mature organizations.

The cases show that these ambiguities and conflicts may be embodied within a single program, such as credit or technology generation. For instance, the FUNDE and FMDR reports incisively illustrate the conflict inherent in providing credit (with good repayment %ages) and alleviating poverty. A "tough," financially sound credit program that achieves sustainable increases in productivity and high repayment rates is inherently more suitable for the "upper poor," or those with assets, experience, and managerial ability. (Whether "poverty lending" following the Grameen Bank's unique experience [discussed in Chapter 4] can alter this conclusion remains to be seen.)

In another case, de Janvry (1983) points out the conflict between inward-oriented strategies such as the organic gardening programs of CET and more long-term market-oriented solutions. In Chile's open cash economy, for example, projects based on self-provisioning and using one's labor for improved subsistence can be only a temporary solution to recession, exacerbated by repression.

Some GSOs and MSOs are by origin and preference small, autonomous, and social; others are larger, highly linked, and economic or technical. Some want to be specialized, others do not. More generally, however, GSOs and MSOs deal with organizational dilemmas or conflicts in one of three ways: trade-off, compromise, or synergy. The trade-off option is a conscious choice by the organization to pursue an alternative path; organizations that opt for compromise follow coexisting but not interacting strategies; and the synergy option means searching for an appropriate combination of mutually reinforcing strategies.

The strongest GSOs and MSOs in the sample are able to take the two latter options. For example, to cope with tension between serving the relatively weak versus maintaining financial viability, URCOOPAPA chose compromise as the solution and decided to extend its services to medium-scale farmers. Although this expanded the resource base, it also brought together two types of farmers with different needs and probably different interests. In another instance, synergy was ANAI's strategy when the organization combined agroforestry tech-

nology with precooperative group formation. In this arrangement service delivery reinforced capacity building and vice versa.

The better-performing GSOs and MSOs in the sample do not seem to conform to the value of narrow specialization and bare-boned task specificity, sometimes identified as necessary for NGO effectiveness.⁵ Although a clear focus and a lean organization are important factors in conditioning performance, accommodation to conflicting pressures and adaptation to dilemmas are more common features of successful GSOs and MSOs.

The Dynamic Dimension

Another aspect of organizational analysis deals more explicitly with the life cycles of intermediaries, that is, how they change and evolve over time. Organizational dynamics can reveal changes in goals, tasks, scope, or capacity as a function of external and internal factors in a constantly moving setting. Montgomery suggests that it is "best to learn from a dynamic institutional process than attempt to replicate a static, finished model" (Montgomery 1988). An improved understanding of the stages and phases of the development of GSOs and MSOs might also help donor agencies identify where the organization is in its evolution, with an end to providing timely and appropriate assistance.

Setting well-defined goals and strategies and allocating sufficient resources to achieve those goals clearly affect organizational effectiveness. Some GSOs and MSOs have been able to articulate clear goals consistently, but others have been burdened by unclear objectives. This lack of clarity is often the consequence of trying to do too much. Some older organizations have not been able to shift to a new central focus when the original goals that once provided their *raison d'être* are no longer valid or relevant. One could describe these as organizations in search of their destiny. This seems to be particularly true of institutions originally set up or promoted by governments.⁶ These may lose their original legitimacy and focus when political circumstances change. At any rate, the cases in the sample are consis-

tent with Paul's findings (1982) drawn from other contexts, in which the program performance of service organizations is associated with the ability to shift from an initially narrow goal or service to sequential diversification and phasing of interventions. (The opposite sequence has been seen in some of the "social" GSOs that succeeded in focusing and consolidating after a fuzzy beginning.)

A central goal may also be obscured by initial failure. This is illustrated best by the URCOOPAPA case. When something does not work, it may be a long time before inertia can be overcome and the unpromising activity replaced by other, more manageable tasks, as happened in the case of PURISCAL. However, it is to the credit of a number of organizations in the sample that they have been able to shift gears and adjust their strategies, even if it took some time and additional resources.⁷ Lack of clear objectives and strategy leads to lowered organizational capacity, but, as suggested, intelligent compromise and synergy can subsequently increase that capacity.

It is possible that GSOs and MSOs do not follow a predictable sequence of development, although within certain types of institutions (such as marketing or credit cooperatives, consumer support), there are some patterns. The case studies illustrate that the evolution of these organizations is characterized by highs and lows, by conflict and uncertainty. The reasons for these swings are complex. They range from political opportunity, macroeconomic conditions, and natural disasters to leadership, internal management, and availability of donor funding.

The forty-two Peruvian cases and the thirty examined here reveal that GSOs and MSOs that varied or adjusted their goals and strategies over time did better than those that branched out and adopted completely new goals and techniques. These studies observed an interesting trend toward convergence of approaches within both the better-performing technical/economic and social/educational GSOs and MSOs. High overall scores are associated with a group of organizations that started out with very strong social inspiration but later tempered it (or channeled it) by adopting a more practical orientation

and concentrating on satisfying specific beneficiary needs. CAPS in Guatemala, for example, shifted from an emphasis on popular education to the provision of production credit (see Box 8.1). Another group of organizations started out initially with a strong entrepreneurial/business orientation, heavy with technical and economic features, but later tempered it with greater social consciousness and sensitivity toward poverty issues and political-economic considerations.

GSOs and MSOs that moved from the social/educational realm toward a more production-oriented approach performed better than those moving in the opposite direction. This is consistent with Leonard's hypothesis, which holds that socially committed organizations can more readily acquire competence than the other way around (Leonard 1982a). On the other hand, within projects, strategies that begin with technical assistance and economic/productive activities proved to have more substantial and long-lasting impact than those that begin with training and organizational and pure community development activities.

How GSOs and MSOs diversify and grow without excessive bureaucratization and loss of sensitivity is another key issue of organizational dynamics. CAMPOCOOP's earlier history suggests that too rapid an expansion into new areas without attention to internal capacity can be disastrous. CIDE has managed to grow while maintaining an informal atmosphere and a participatory spirit using a decentralized structure (the creation of relatively autonomous projects). However, the increased number of projects and staff have strained the organization's consensual decision-making style. Like many other GSOs, CIDE has an executive council that is supposed to be responsible for decision-making and internal coordination. The case study found, however, that the council's functions are not clearly defined, that it is burdened with too many details that should be decentralized, and that it lacks power to carry out its decisions. Other larger organizations in the sample, such as FMDR and CIPCA, also have these problems. The necessity to delegate responsibility, especially during heavy work-load periods, puts a strain on the informal collegial style practiced earlier when the organizations were

smaller. Evidence from both the Peruvian study and the thirty cases suggests that GSOs and MSOs that significantly expanded the range of beneficiaries did not perform as well as those that varied their services or methods to the same type of clientele.

As the needs of beneficiaries expand, so must the capacity of the organization to continually meet those demands. The Organization for Rural Development (ORD), which operates in isolated areas of the Caribbean island of St. Vincent, provides an exemplary illustration of organizational evolution. As the capacity of ORD's client farmers moved increasingly from subsistence to more market-oriented production, ORD responded by gradually improving staff members' expertise in increasingly sophisticated production and marketing systems. At the same time, the organization evolved from a highly centralized administrative structure to a more decentralized, regional administration. This change improved the organization's ability to respond to expanding needs and allowed more staff and beneficiary participation in decision-making and operations.

In more mature organizations, the problem is not so much to form new groups for collective action but to maintain and give new life to existing groups. One alternative is the PURISCAL model, where a completely new and much desired activity was superimposed on a rather dormant set of local groups. This galvanized them into action and encouraged them to devise other good programs. Another possible model is the new HORTICOOP, in which the old cooperatives now have to share power with management and compete with individuals for services. The cooperatives will have to either revitalize or disappear. This is drastic medicine, but it works.

In the case of SADECSA, different strategies have been used for different activities. Initially, SADECSA formed to help member societies maintain legal rights to their land. Now that the societies have greatly reduced their risk of losing the land and are engaged in production beyond the subsistence level, the strategy has shifted to an emphasis on income growth. Another more recent shift has been from providing assistance exclusively to male heads of households to integrating the family in all activities.

From a historic perspective, current strategies do not reflect either the past or the future in the life cycle of a GSO or MSO. Older organizations such as URCCOOPAPA and CAMPOCOOP were probably more concerned with capacity building from the start, and, in fact, CAMPOCOOP might return to that strategy once the political environment in Chile shifts. In contrast, ANAI will have to become more oriented to income growth in the future as its nursery groups gear up for diversified tree crop production. What this means, and what the ORD example illustrates, is that different organizational capacities may be needed by GSCs and MSOs at different times in their life cycles. Donors might be able to anticipate changing needs and perhaps help prepare their grantees for new tasks.

It is important not to lose sight of the dynamics of history and context in arriving at a notion of GSO/MSO performance. Although there are some young organizations among those with top ratings, most are older and seasoned. They have learned how to deal with donors, clients, friends, and adversaries, and they have arrived at some measure of internal coherence and external legitimacy so that they do not have to live from crisis to crisis.

However, even these seasoned and mature intermediaries are now facing new challenges as the new decade unfolds. They will have to gear up for further organizational adjustments. We have learned from the earlier chapters that their new challenges are likely to include the following:

- Maintenance of vigor and dynamism without the stimulus of the original founders and leaders;
- Expansion and management of larger workloads without loss of quality;
- Learning to collaborate with governments without loss of autonomy;
- Forging closer GSO MSO links without tutelage and interference; and
- Networking and pining with other institutions without loss of identity.

Box 8.1 CAPS: From Popular Education to Production Credit

Centro de Autoformación Para Promotores Sociales (CAPS) had its origin in 1967 as an organizational unit of the University of Rafael Landival, a Catholic institution. It now works in seven of the twenty-three departments of Guatemala attending Indian villages that are mostly isolated and bypassed by other development programs. The average landholding of its beneficiaries is approximately one acre.

CAPS is an example of a facilitator GSO that started out in nonformal education, community development, and organizational assistance and gradually took on a more economic/technical role stressing credit. After the devastating earthquake of 1976, community leaders and CAPS-trained promoters expressed interest in credit schemes. It is important to note that the villagers asked that CAPS offer credit-it was not a preference of CAPS, but a response to the local communities. Beginning with only US\$47,000, CAPS made seventy-five village loans in its first five years of lending.

In 1981, in the face of severe government repression in the countryside and a deteriorating economy, CAPS augmented the fledgling credit program for low-income farmers with the help of the IAF. The IAF grant supported twenty-five group loans which generated forty-five projects not only in agriculture and livestock but also in small rural crafts and businesses. The loans required no collateral. The repayment rate has been an excellent 90 per cent. The loans benefited thirty-six communities and over 1,200 families. Communities must express interest in the program, invest their own labor, and pay a fee for the training course before the loans are granted.

CAPS is particularly careful not to allow its credit program to promote a local elite. It has avoided this common problem through restrictions. For example, loans may not be used for hired labor and may not exceed the amount required for one person's work. In addition, CAPS is sensitive to the problem of creating dependency relationships through the credit program. Extensionists are trained to reduce their contact and advice to communities as the projects become more viable. Moreover, communities are encouraged to seek assistance from other development organizations and social service agencies.

It is notable that by taking up credit CAPS did not diminish its educational and organizational efforts. In fact, the credit program complements and strengthens the education program. Promoters have incorporated credit into their community development efforts. However, CAPS, like many other GSOs, considers credit as a means to community development, not as an end in itself. In sequencing its promotional approach, CAPS likes to place credit last, that is, at the culmination of intensive awareness training group formation, and the accomplishment of tasks that are not dependent on external inputs. However, in practice this sequence does not always work. Credit (with other assistance in economic activities) now often serves as an entry point on which community solidarity can be built. Clearly this combination requires a group credit scheme, which is the basis of CAPS lending.

One great strength of the group credit program is the high quality of CAPS's extensionist/promoter field staff. CAPS was the first in Guatemala to make use of indigenous extensionists. Most extensionists are campesinos who speak the Indian languages. CAPS promoters are not formally tied to CAPS after their training. In fact, many of them go on to fill leadership posi-

tions in other community grassroots organizations. This has created an informal yet wide network. Through networks with other NGOs (erected with CAPS sponsorship), many of the innovations of CAPS are widely accepted and used.

In spite of long periods of repressive military regimes, the organization has maintained working relationships with government agencies. CAPS views the long-term implications of its credit program as preparing its client groups for dealing more effectively with state or commercial credit. By putting pressure on official agencies such as BANDESA, the main source of agricultural credit in Guatemala, CAPS seeks to make them more effective and responsive. This pressure has already resulted in more timely release of funds before the planting season.

It is also noteworthy that CAPS has evolved an effective management style and a rigorous lending process, unusual in a GSO of social welfare origins. Through the revolving credit program, CAPS has opened up the possibility of becoming more self-reliant financially.

CAPS has instituted a series of procedures that are perhaps unique for such a GSO in their detail and stringency for the cycle of application, approval, disbursement, and monitoring of credit funds:

A group that wishes to apply for a loan must complete what is in effect a community study, describing the economic base of the community and the needs that justify the loan. A detailed financial cost/benefit study is also done, documenting the profits that can be expected to accrue to participants in the project.

Every project is reviewed and approved or rejected by the central council, consisting of the executive director, the administrative director, the coordinator of exten-

sionists, and the accountant. The rejection rate may be as high as 33 %, though rejected proposals may be revised and resubmitted.

The village committee members make a trip into Guatemala City (at their own expense) to participate in the formal signing of the agreement. This requirement as well as the earlier community study, is maintained as an educational device and to instill in project participants a sense of the seriousness of the matter.

The extensionist must also be present for the signing of the agreement. He or she becomes cosigner of the loan and is made to feel responsible for its timely recuperation.

After signing the loan agreement, which carefully specifies the interest rate and amortization schedule, the committee is given a check for the purchase of materials. This check is issued in the name of the company or store from which the inputs will be purchased. The borrowers never receive cash.

Installments are repaid to the central office -a procedure that appears to meet with the approval of the village committees. The committees are urged to convert their cash to a check in a municipal bank but find pleasure in delivering a large bundle of cash to CAPS.

As part of every monthly report, the extensionist must prepare a detailed radiografía (x-ray) of each credit project, specifying the activities carried out in that month, the resources utilized, the achievements, the problems that arose, and the solutions that were applied. He or she briefly evaluates the project.

Conclusion

GSOs and MSOs from the sample that consistently rate well in major respects are generally small (as organizations go) but large enough for functional specialization.

They can be larger as long as they do not lose their collegial, informal style of operation. Over time, they have developed a clear, coherent agenda, modifying their goals and methods according to the changing needs and circumstances of both their beneficiaries and the environment in which they operate. Instead of expanding their scope of activities and range of beneficiaries, successful GSOs and MSOs generally intensify and deepen their efforts, employing a set of interconnected activities so as to create synergy or complementarity among projects. The best performers also actively seek and subsequently respond to beneficiary input, more through informal channels, such as day-to-day interaction between staff and clients, than through formal mechanisms. Although they have mastered the art of listening and responding without dominating, they do offer sensitive guidance. They tend to operate on a regional rather than local or national scope. By employing a spatially coherent strategy, they take advantage of opportunities to form beneficial linkages with decentralized public agencies and other NGOs involved in similar efforts. Linkages with national government ministries and agencies and private technology centers are seen as beneficial. Even with extensive state collaboration and resource transfers, the good performers manage to preserve a measure of independence. Functionally, they combine effective service delivery with capacity building of base-level organizations.

The good performers started either with strong social inspiration and gradually tempered it with greater professionalism or with an entrepreneurial or technical orientation and gradually acquired greater social awareness. The top organizations are generally able to weather various crises and overcome serious conflicts. They almost invariably get going and develop under strong inspired leadership, but over time, the top staff rotate as the original leaders leave. Finally, the best-performing GSOs and MSOs usually can count on some degree of financial security for their core support.

To rise to the challenges of this decade appears to be a very tall order. It will not only tax the ingenuity and dynamic capacity of intermediary NGOs but will also call forth new types of thinking and new modes of support from their sponsors and donors. The next chapter addresses the question of what donors might do to help bring out the best in the intermediary organizations they sponsor.

Notes

- 1- This discussion is inspired by David Brown's report on support organizations in Asia. He uses the term support organization to designate so-called apex organizations that support other NGOs, rather than in the sense that support organization is used in this book the inherent tensions Brown identifies within apex NGOs are also largely applicable to individual grass-roots-oriented NGOs Society for Participatory Research in Asia 1990).
- 2- This contradicts Tendler's earlier study (1982b) but is supported by the analysis of Esman and Uphoff (1984), based on a large sample of cases.
- 3- These government-initiated NGOs evoke different reactions from the critics. Montgomery clearly is not bothered by public-sector origins or linkages and favors "bringing both government and business leaders into the act" (Carroll and Montgomery 1987, p. 38). NGO purists warn that the formation of government organized NGOs (GONGOs) seldom reflects a spontaneous expression of shared value commitment, and participation is often less than voluntary. The motives of forming such organizations may be positive, and they may serve useful social functions, but they are less likely...to serve as consequential agents for social innovation. (Brown and Korten 1989, p. 222)
- 4- In some cases, opportunistic organizational behavior is masquerading as experimentation or innovation. Funds are accepted for projects favored by certain donors in fields where the organization has little experience or comparative advantage. (This was the case in the push for export promotion in Costa Rica and Peru by the U.S. Agency for International Development.)

3

Chapter

SOCIAL ORGANIZATION FOR SUSTAINABLE DEVELOPMENT

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SHORTCUT AND PARTICIPATORY METHODS FOR GAINING SOCIAL INFORMATION FOR PROJECTS

R. Chambers

■ The prior chapters have presented the case for putting people first. This case is based not just on ethical grounds, though many find the ethical obligations sufficient on their own. It is also highly practical. With repeated experience, evidence has built up to demonstrate that where people and their wishes and priorities are not put first, projects that affect and involve them encounter problems. Experience also shows conversely that where people are consulted, where they participate freely, where their needs and priorities are given primacy in project identification, design, implementation, and monitoring, then economic and social performance are better and development is more sustainable. There are, and always will be, other environmental and managerial factors that influence how well or how badly a project does. Irrespective of these influences, evidence shows that in rural development, putting people first is a necessary condition for good performance whenever local people are involved.

Information: What and Whose

In putting people first, social information plays a key part. For learning about and

understanding people, their needs and priorities, and discovering the wider implications of social and cultural conditions, the approaches and methods of eliciting information are critical but often neglected or badly applied.

In the normal development project and professional practice, especially in the 1960's and 1970's, four interlocked defects stand out in the processes of generating, analyzing, and using social information in rural development.

First, things have come before people. Aid agencies and government organizations have tended to be staffed and influenced by engineers, economists, and statisticians-professionals concerned mainly with the physical and with the figures. In the sequence of the project cycle, survey and construction precede operation. In the early stages of many projects, then, physical and biological surveys and information dominate, as do professions and disciplines such as cartography, soil science, hydrology, engineering, agronomy, animal science, forestry, and economics- which are concerned primarily with physical, biological, and numerical aspects of a project rather than its social dimensions. Where people are taken into account, they are more often counted than listened to or learned from. Early project implementation is also often preoccupied with things-with the construction of roads, buildings, and other works. People, and the professions and disciplines concerned with people-such as sociology, social anthropology, and agricultural extension-are treated like poor relations. Social scientists tend to be called in later, if at all, to deal with "the people problem"-to persuade people to move to make way for the dam lake, to overcome the "constraint" of non-participation, to adapt the program to local cultural norms, or to transfer the technology generated on the research station. People have come last.

Second, poorer people have been easily neglected. They are the least accessible to outsiders, the least articulate, the least organized, the least likely to be able to complain or resist, and politically, the least important to persuade. Isolated, powerless, and silent, their priorities and needs have been low on the agenda. If people have come last, the poorer people have come last of all.

The third defect is that conventional methods of social investigation have often not been cost-effective. Decisionmakers need information that is relevant, timely, true, and usable. In rural development, a great deal of the information generated has been, in various combinations, irrelevant, late, wrong, or unusable. It has also been costly to obtain, process, analyze, and digest. Information gathering has been inefficient. Criteria of cost-effectiveness have not often been applied, and manifest inefficiency has sometimes been met by demanding not better information, or less of it, but more. All too often, the social information obtained has been useless or misleading, and late or out-of-date.

Fourth, information has been acquired, owned, and analyzed mainly or only by outsiders. In the first edition of *Putting People First*, reflecting the development ethos of the late-1970's and early-1980's, I wrote that "the challenge is to find more cost-effective ways for outsiders to learn about rural conditions." That remains a challenge. But significantly, it was "our" knowledge-and capacity to gain knowledge-that seemed to count, not "theirs." The sustainability of development and empowerment, which are associated with rural people's own generation and use of knowledge, were not on the agenda.

Concerning these four defects, the 1980s have witnessed shifts of emphasis, though sometimes only localized and on a small scale. As we enter the 1990s, there is wider awareness in development circles of the priority of people, and particularly of the poorer people, than there was in earlier decades. Some social investigations have become more cost-effective: new shortcut approaches and methods have been invented and developed, some of them adopting the rubric of rapid rural appraisal (RRA); and these methods have gradually spread. There is also increasing concern with practical questions about who gains and has knowledge and who has the ability to use it. With more attention paid to the issue of sustainability through the participation and empowerment of rural people, especially the poor, it is increasingly recognized that it matters who generates and "owns" knowledge, and whose capacity to learn and analyze is enhanced. Participatory research, participatory action research, par-

ticipatory agricultural research, and participatory rural appraisal are all finding their places in the new vocabulary of development.

Against this background, the challenge is to develop and spread approaches and methods to gain social information for rural development projects, making them more cost-effective for outsiders to undertake and more participatory for rural people to sustain. With this in mind, the chapter reviews the rationale and range of some shortcut and participatory methods and assesses some of their potentials. The question is: how can the needed information be gained and used, by whom, and with what costs and effects. To seek answers, let us start by examining in more detail the defects of what is often still normal practice.

The Two Traps of Outsiders

In practice, most outsiders are still trapped by two sets of inappropriate methods for generating the social information they seek and need. These have been referred to as the “quick-and-dirty” and the “long-and-dirty” methods, where dirty means not cost-effective.

Quick and Dirty

The most common form of quick-and-dirty appraisal is rural development tourism—the brief rural visit by the urban-based professional.¹ This can be very cost-effective with the outstanding individual; one example is Wolf Ladejinsky, who in two remarkable, short field trips to India saw what was happening in the green revolution and reported it years before plodding social scientists came to the same conclusions carried out to two spurious decimal points.² But more commonly, rural development tourism introduces biases that mask the perception of rural poverty, reinforce underestimates of its prevalence, and prevent understanding of its nature. These antipoverity biases are:

- Spatial (urban, tarmac, and roadside). The poorer people are often out of sight of the road, having sold out and moved

away. They tend to be concentrated in regions remote from urban centers and to live on the fringes of villages or in small inaccessible hamlets. ³

- **Project.** Outsiders link up with networks that channel them from urban centers to rural places where there are projects, where something initiated by outsiders is happening or is meant to be happening, to the neglect of nonproject areas.
- **Personal contact.** Rural development tourists tend to meet the less poor and the more powerful, men rather than women, users of services rather than nonusers, adopters rather than non-adopters, the active rather than the nonactive, those who have not had to migrate, and (inevitably) those who have not died. In all cases the bias is against perceiving the extent of deprivation.
- **Dry season.** In many tropical environments the wet season is the worst time of year, especially for the poor, since it brings hard work food shortages, high food prices, high incidence of disease, and high indebtedness.⁴ Urban-based professionals, however, usually travel in the post-harvest dry season when things are better.
- **Politeness and protocol.** Courtesy and convention may deter rural development tourists from inquiring about and meeting the poor people. The visitor is also short of time, and the poorer people stand at the end of the line.

Moreover, these biases interlock. The prosperity after harvest of a male farmer on a project beside a main road close to a capital city may color the perceptions of a succession of influential officials and foreigners. The plight of a poor widow starving and sick during the wet season in a remote and inaccessible area may never in any way impinge on the consciousness of anyone outside her own community. The biases pull together to direct attention toward those who are better-off, and away from those who are poorer and more deprived.

Many other defects of quick-and-dirty investigators are well known but a short list can serve as a warning:

- Quick-and-dirty investigators lack rapport with respondents, who give misleading replies that may be deferential, prudent, or designed to avoid penalties or gain benefits and who may evade sensitive topics, state social ideals not actual practice, and so on.
- Investigators-especially outsiders who are “old hands” and who “know it all”-fail to listen. They want to talk and teach rather than learn, and they reinforce misperception and prejudice by projecting their own ideas and selecting their own meanings.
- Investigators overlook the invisible-they observe physical things and activities, but not social and cultural relationships. They may not ask about or correctly understand crucial social facts such as patron-client relations, factions, informal organizations, norms, indebtedness, interest rates, wages, and control of assets and decision making within the family.
- Investigators see only a “snapshot”-a moment in time. Cyclical and periodic events such as seasonal activities and regular weekly markets may never be uncovered, and trends, often more important than a static view of current conditions, are easily missed.

This list could be lengthened, but the point is that quick appraisal can be seriously misleading, especially when it concerns the poor. Rapid is often wrong.

Long and Dirty

At the other extreme, traditions of academic research value long and costly investigations that often collect a massive volume of data. The real or imagined requirements of doctoral research induce students to seek safety and respectability by avoiding shortcuts and find-

ing out more, not less. So social anthropologists immerse themselves for long periods in alien cultures, and sociologists and agricultural economists plan and perpetrate huge questionnaire surveys. Sometimes the outcome is academically excellent and makes a long-term contribution to understanding and action. All too often, however, the delays are excessive: the social anthropologist's field work is published (if at all) ten years later; the massive survey takes years to process, if it is processed at all.

In its still-not-uncommon pathological form, the multidisciplinary survey questionnaire has thirty or more pages, each discipline with its questions, which if asked are never coded, or if coded never processed, or if processed and printed out never examined, or if examined never analyzed and written up, or if analyzed and written up never read, or if read never understood and remembered, or if understood and remembered-never actually used to change action. Large-scale multidisciplinary rural surveys must be one of the most inefficient industries in the world. Benchmark surveys are often criticized and yet these huge operations persist, often in the name of the science of evaluation; they preempt scarce national research resources and generate mounds of data and papers, which are an embarrassment to all, until white ants or paper shredders clean things up.

Some social investigations are long and clean. Nothing in this chapter should undervalue them. Many of the insights of social anthropologists and sociologists later prove useful. Development anthropology has many practitioners now who have shown the capacity to make substantial contributions to projects. As for surveys, some of the best repeatedly monitor the same villages or people over a long period. Examples are the health and nutrition work of the Dunn Nutrition Unit, Cambridge, in Keneba village in the Gambia, the International Centre for Diarrheal Disease Research in Matlab Thana, Bangladesh, and the social and agricultural village survey of the International Crops Research Institute for the Semi-arid Tropics (ICRISAT) in India.⁵ Another example is the study of processes and time-trends of access to and use of common property natural

resources by the poor rural people, as carried out by N. S. Jodha in Madhya Pradesh and Rajasthan, India.⁶ Such types of findings can be generated only through long, systematic research. Shortcut methods may not be an adequate tool to investigate such processes. Careful, patient, in-depth research is often needed in addition to rapid investigation procedures, as are revisits to areas and people earlier studied.

That said, it is still probably true in the early 1990's that most large-scale surveys, leaving aside those of a strict census type, are monumentally inefficient both in the quality of data obtained and the long delays entailed by the analysis and reporting of survey data. Ironically, the most useful information from large questionnaire surveys often comes not from the survey itself but from informal observations by those who conduct it.⁷ Often, the survey's statistics are hardly used at all, even if the data are processed. With large surveys, long is often lost.

In Search of Cost-effectiveness: Rapid Rural Appraisal

The search for appraisal methods has sought to find a middle zone between quick-and-dirty and long-and-dirty, toward a zone of greater cost-effectiveness, one of approaches and methods that are fairly-quick-and-fairly-clean. People in many disciplines and professions have taken part in this search. In the 1980s, some of the inhibitions of earlier decades, which deterred writing and publication, have fallen away and a large literature has been published on what has come to be known as rapid rural appraisal (RRA). "Hard," refereed professional journals have accepted papers based on methods that have come to be recognized for their own rigor. Areas in which contributions have been made include appraisal and analysis concerning: agroecosystems; natural resources, forestry and the environment; irrigation; health and nutrition; farming systems and research; marketing; organizations; and social, cultural, and economic conditions.⁸ Two major pioneering institutions have been the University of Khon Kaen in Northeast Thailand and the International Institute for Environment and Development in London.⁹

These developments must not distract from the major obstacles to new and shortcut methods that persist in most of the professional world, including colleges and universities. The words of one participant at an RRA conference in 1979 are still valid: "by the time people leave university the damage has been done"-inappropriate professional attitudes and rigidity in methods have been imparted and internalized. Another participant had been forced to abandon the employment of university graduates as enumerators because of their questionnaire mentality, and had instead used high school students who were more flexible and more open to learning from respondents.¹⁰ One major blockage has been an over-reverence for formal statistical methods and a failure to treat them as servant and not as master.¹¹ More generally, professional value systems and rewards, and sheer inertia and conservative respectability have deterred improvisation in learning about rural conditions. Better, it has been thought, to be long and legitimate than to be short and suspect.

RRA has, though, developed its own rationale, principles, and rigor.¹² Different schools with different emphases have evolved. Special strengths have been the use of multidisciplinary teams and semi-structured interviewing by Khon Kaen; spatial, temporal, and social diagramming by IIED; and community participation by the Kenya National Environment Secretariat and Clark University. Many others have also evolved approaches and methods for special purposes. All, however, share five basic principles and practices:

- **Optimizing trade-offs.** The concept of trade-offs is basic. It relates the costs of collection and learning to trade-offs between the quantity, relevance, timeliness, truth, and actual beneficial use of information. The paradoxical principle here is optimal ignorance. This means knowing what is not worth knowing, and not trying to find it out. It also includes knowing when enough is known and then abstaining from trying to find out more. A corollary of optimal ignorance is appropriate imprecision, or avoiding measurement or precision that is not needed.

- **Offsetting biases.** Deliberate efforts are made to offset biases, such as those of rural development tourism, by taking time instead of rushing, listening instead of lecturing, probing instead of passing on to a new topic, and being unimportant instead of important. The principle here is bias reversal, deliberate action to gain an unhurried, balanced, and representative view-to see and learn about what is usually out of sight or not mentioned.
- **Triangulating.** A menu of methods is available a la carte, to be used as need and opportunity arise. The range of methods recorded and available is growing. This permits the application of the principle of triangulation.¹³ Triangulation means using more than one method or source (often three) for the same information. Examples include the use of research methods with different approaches or informants to obtain the same data; the sampling of units (initially one from near the middle, and one from toward either end of a distribution); and team composition, to represent different disciplines or even to add to a team in the course of investigation.
- **Learning directly from and with rural people.** Knowledge of rural people is fundamental to RRA for social information, and also for much physical information. The scope and validity of much indigenous technical knowledge is now widely recognized. The principle here is direct, face-to-face learning by outsiders with rural people.
- **Learning rapidly and progressively.** The process of RRA involves rapid and progressive learning, which is flexible changing concerns, directions, priorities, and methods; interactive-with intensive exchanges of information and ideas between people; iterative-returning to questions, places, and informants; and, at its best, improvising and inventive-devising new methods and tailoring actions to needs. The principle here is conscious exploration; making judgments and decisions about what to do next on the basis of what has been discovered so far, not according to a blueprint, but as an adaptive learning process.

The Menu of Methods

In the late 1980s there was still no comprehensive manual of RRA methods, although several organizations produced their own guides.¹⁴ A summary listing can illustrate some of the range and diversity of methods available.

- **Secondary data review.** A review of published and unpublished data, which can take many forms, including surveys, studies, annual reports, trip reports, travel books, ethnographic literature, articles, maps, aerial photographs, satellite imagery, and computer data files.
- **Direct observation.** Personal visits and observations with time to follow up on what is seen. An observational checklist is one aid to systematic observation.
- **Do-it-yourself** Much briefer participant observation than in the normal social anthropological mode can take the form of undertaking a rural activity oneself. This allows insights and prompts the volunteering of information that would otherwise not be accessible.
- **Key indicators.** Key indicators can be shortcuts to insights about rural social conditions and change, especially when suggested by rural people themselves.¹⁵
- **Semi-structured interviews.** Informal interviews with checklists but without questionnaires, which permit probing and following up on the unexpected, without the requirement that all the checklist points must be covered in any one interview.¹⁶
- **Key informants.** Identifying those best able to inform on particular topics, or to give special points of view, whether individually or as groups.

- Group interviews. Interviews and discussions with groups, whether casually encountered (such as coffeeshop or teashop groups); specialized or focus groups of similar people; structured groups with an organized composition to represent different points of view, capabilities, or knowledge; and community groups.¹⁷
- Chain of interviews. Sequences of interviews, whether to cover knowledge of stages of a process (such as following a crop from land preparation through cultivation, harvest, marketing, processing, storage, sale, and cooking to consumption), or to follow through on similar topics from early to later contacts, as when group interviews lead to the identification of individuals who are key informants.¹⁸ Repeat interviews in different contexts, including walks with observation, can be part of this.
- Transects and group walks. Systematic walks (or in large areas, rides or drives), for example from the highest to the lowest point, visiting and observing diverse conditions en route, including the poorer people and microenvironments.
- Mapping and aerial photographs. The use of formal maps, whether general or specialized, and the preparation of informal maps based on observation and on local knowledge.¹⁹ The use of aerial photographs as aids to ecological, social, and political mapping and to identifying longitudinal change.²⁰
- Diagrams. The use of diagrams to express, share, and check information. These include diagrams to represent information that is spatial, for example for transects; temporal, including trend lines for changes over the years, and seasonal calendars for changes within years for dimensions such as labor, diet, disease, cropping practices, prices, livestock fodder, rainfall, migration, and tree use; social, including links and overlaps between groups and institutions at the community level; and

concerning processes. Types of diagrams include sketches, bar diagrams, histograms, flow diagrams, Venn diagrams, and decision-trees.²¹ Venn diagrams (also known in South Asia as chapati diagrams) have been used to identify village institutions and their interrelationships.

- **Ranking, stratifying, and quantification.** Methods for eliciting knowledge and preferences from informants, which are both quick and enjoyable, have been used.²² Aids to quantification and ranking include the Atte board, informal pie diagrams, and various systems of questioning.²³ Wealth ranking has proved a quick and accurate method for stratifying a rural population and has been tested and found to be effective in several different environments.²⁴
- **Ethnohistories.** These are histories recalled and recounted by rural people. In one notable example, cultivator biographies were elicited with respect to a particular crop, cassava, in the Dominican Republic.²⁵ In another, information was obtained on changes in child-rearing practices in Ghana, with three generations of mothers as informants.²⁶
- **Stories, portraits, and case studies.** These are anecdotes and descriptions of people and households, farming systems, social groups, villages, events, customs, practices, or other aspects of rural life, designed to portray conditions as one part or stage in understanding.²⁷
- **Team interactions.** The deliberate organization of team interactions is part of many RRAs. The classic example is Hildebrand's sondeo technique, originating in Guatemala, in which social and biological scientists are paired, changing partners each day. This technique has also been adopted in Australia.²⁸
- **Key probes.** Sometimes an exceptionally revealing key question can be identified, as in the fishermen's survey reported by

Pollnac in chapter 8. Although "more sophisticated techniques of collection and analysis of data could have been used," he found that simply asking fishermen why they sold to one middleman rather than to another was sufficient to produce information on which to base two operationally significant recommendations.

- Questionnaires. Late and light. If a questionnaire is needed, it is usually devised late in the investigation, tied in with dummy tables that are known to be needed, kept short and simple, and immediately analyzed.

The above methods are described to indicate some of the range of options available but do not cover them all. The cost-effectiveness of these methods depends on how appropriately and well they are used. However, where RRA methods have been compared with more conventional methods, they have proved reasonably accurate and almost always more cost-effective.

Adisak and Cernea have documented that four large sample surveys based on long questionnaires for evaluating extension impact in Thailand had an average cost of 1.3 million bhat each, while four rapid and in-depth sociological studies on small samples carried out much faster by the same evaluation unit each cost only 82,000 bhat, or fifteen times less.²⁹ Furthermore, four years later none of the large-scale surveys were fully processed and analyzed, while the four rapid cases had already long been analyzed and interpreted and their findings used by project management.³⁰ In a similar case, Collinson wrote that, in studying a local farming system, a lengthy and costly formal verification survey had always confirmed the findings of his shorter, cheaper, and informal exploratory survey.³¹ Later, in Kenya, this finding was supported when a quick, informal agricultural investigation was carefully compared with a longer and more expensive formal one and showed insignificant differences between the two.³²

In several cases where RRA methods have been compared with conventional surveys, they have proved not simply just as good but

more accurate and informative. In Kenya, an investigation of the role of wild indigenous plants in land use systems was conducted both through a formal random sample of sixty-three households, and through group interviews and informal interviews with a chain of informants from "average" to expert. The formal survey took three times as long and resulted in the same information as the informal approach, but with less detail and coherence.³³ In a subhumid zone in Nigeria, a study of browse quality found a high correlation between rankings given by different pastoralists and that the pastoralists' information was more practical and timely than a laboratory chemical analysis.³⁴ In a pastoral community in Kenya, Barbara Grandin's wealth ranking not only showed a 0.97 correlation with a ranking of households based on a survey of livestock units, but also brought to light a number of census errors.³⁵ RRA methods, well used, are not only cost-effective; for insight and accuracy they are also quite often the best.

Participatory Rural Appraisal

Most of the methods mentioned involve outsiders learning from, and sometimes with, rural people. The mode of RRA presented, though, is primarily extractive. When outsiders are obtaining information for the identification, preparation, appraisal, monitoring, and evaluation of some sorts of projects, these extractive methods have obvious uses. But knowledge can also be generated by more participatory approaches, in which investigation and analysis are carried out more by rural people themselves, in which they "own" the information, and in which they articulate their priorities.

Participatory rural appraisal (PRA) belongs to, draws on, and overlaps with other members of a family of approaches that have been or are participatory in various ways. These include the community development of the 1950s and 1960s, the dialogics and "consciencization" of Paulo Freire, participatory action research, and the work of activist NGOS in many parts of the world, which have encouraged and enabled poor people to undertake their own analysis and action.³⁶

PRA has adapted and further developed RRA methods in a participatory mode, increasingly enabling rural people to use them for their own analysis. Recent developments include participatory approaches to community natural resource assessment, management, and development evolved in Kenya by the National Environment Secretariat, in association with Clark University, and in India by the Aga Khan Rural Support Programme in Gujarat in association with the IIED.³⁷ These draw on the agroecosystems analysis developed by Gordon Conway and others, emphasizing transects, trend and seasonal analysis, social mapping, and problem and opportunity identification by and with rural people themselves, leading to community action.³⁸ Most recently, MYRADA, an NGO in South India, has taken this further, by developing powerful and popular new methods, such as participatory mapping and modeling, and by emphasizing changes in outsiders' behavior and new ways of establishing rapport.³⁹

A parallel development has been farmer participation in agricultural research. Methods have been developed to enable farmers better to analyze their farming systems, assess their own needs, and improve the effectiveness of their own experiments.⁴⁰

Visual observation is a common element in much PRA. This means that both rural people and outsiders can together see, discuss, point at, manipulate, and alter physical objects. This differs from the questionnaire interview mode in which information is transferred from the words of the interviewee onto the private paper of the interviewer, without the interviewee being able to check and correct what is written, the information being then taken away and analyzed elsewhere separately, and often by someone else. Visual observation takes two main forms.

The first is the simple and common sense practice of show-and-tell: discussing a technology, plant, animal, farming, or social activity in the field, or where the practice or activity is taking place.

The second is shared diagramming. This can take many forms and new ones are being invented. Aerial photographs can provide tem-

plates for participatory mapping: they are often easily and enthusiastically interpreted by rural people in different countries and continents. They have been applied to mapping of land use and tenure for local-level planning by and with rural people and for identifying the boundaries between social groups, either by drawing on transparent overlays or directly on the photographs with chinagraph pencils. Maps and other diagrams and models can be drawn or made on the ground where many people can see, alter, and correct them. Stones, pellets, sticks of different sizes or lengths, and other local material can be used for shared quantification, ranking, and indication of trends. Analytical games of various sorts can be devised and used. Not only does visual sharing make information available to outsiders who would otherwise not have access; it also makes explicit to rural people the knowledge they already have in a diffuse way, helps them to develop and share it, allows crosschecking between individuals, and enhances analysis by rural people themselves.

Participatory rural appraisal changes and reverses roles. Outsiders are less extractors of information, and more catalysts and facilitators. Such investigation and analysis can be carried out more with rural and poor people themselves. New knowledge is generated and owned more by them. In the process they gain in confidence and thus are empowered. And development projects and initiatives that follow are likely to be more participatory and so, more sustainable.

Potentials and Dangers

Rapid rural appraisal (using the term here and below to include participatory rural appraisal) has many applications. Most obviously these include assessments of emergency situations, reconnaissance for time-bound government programs and policy requirements, and the investigation of particular topics. Besides these, two applications deserve special mention.

The Project Process

As stated or implied throughout this book, the use of RRA with a focus on social information can substantially improve the current project process used by development and government agencies.

RRA can be used to offset the tendency for the early stages of projects to be dominated by things rather than people, by technical experts (engineers, economists, biological and physical scientists) in the absence of social scientists, and by the interests of the better-off rather than by those of the poorer.⁴⁰ A clear example is the stage of project identification. If conceived in the narrow sense of having and establishing the idea of a project, then identification is easily influenced by those with special interests or local power. J. Price Gittinger's classic textbook, which devotes only one page out of 443 to "identification," recommends and perpetuates the narrow non-participatory manner of identifying projects. The textbook says:

The first stage in the (project) cycle is to find potential projects. There are many, many sources from which suggestions may come. The most common will be well-informed technical specialists and local leaders. While performing their professional duties, technical specialists will have identified many areas where they feel new investment might be profitable. Local leaders will generally have a number of suggestions about where investment might be carried out.⁴²

In this formulation, the process of identification is open to the normal biases of professionals and to the suggestions of the members of local elites. Such an approach will rarely give rise to projects that originate in the needs of the poorer rural people. In contrast, systematic RRA, when used for consulting them in an unhurried and sensitive manner, enabling them to analyze their conditions and formulate their priorities, should lead to different and more equitable projects and agendas.

RRA also has a big part to play later in the project cycle. The appraisal stage is the most obvious but at least as important are monitoring and evaluation, mid-term reviews, and adjustments in the learning process. All too often, monitoring and evaluation are superficial, measuring indicators that do not reflect changes in well-being, or failing to penetrate multiple causality. As Uphoff points out in chapter 13, monitoring and evaluation should be participatory, involving both rural people and government officers. Longitudinal

applications of RRA methods at intervals and participatory trend analysis can monitor and reveal changes and the underlying causes, using indicators such as real wages for agricultural laborers, in- and out-migration, fuel availability by type and use, changes in diet, and the nutritional status of children.

RRA can also provide the rapid and accurate feedback necessary for a learning process style of project implementation, with “planning by successive approximation, “and mid-course changes. Badly done, it can reinforce error. Well done, without rushing, it can considerably improve performance.

Training, Awareness, and Keeping Up-to-date

A second potential of RRA is for training and awareness. RRA has many applications in education and training institutions and for the professional formation of staff in government offices, NGOs, and technical agencies. On education, Michael Cernea points out in the first chapter how crucial it is for universities to avoid producing “new cohorts of socially incompetent technical experts or technically illiterate sociologists.” Team RRAS are one potent means for avoiding or compensating for this danger. They induce rapid learning from colleagues and clients alike; personal, disciplinary, and departmental barriers break down. Some higher education institutions have already used RRA with their students and staff. The Institute of Rural Management at Anand in India, as part of a two-year course, has its staff and students spend a month in a village with an agenda of topics to investigate, such as the daily lives and problems of a group of poorer people. The University of Khon Kaen in Thailand had by early 1985 involved staff of at least sixteen university departments in field RRAS. The experiences of these and other institutions indicate that, as a standard part of university and institute training, a well-conducted RRA focused on the poorer rural people can sharpen professional skills, and generate new social commitment.

RRA methods can also be used for training, awareness, and updating the perceptions of field and headquarters staff of govern-

ments and NGOs. There is an unknown potential for training field staff in RRA methods to perceive and relate to the diversity of rural conditions, legitimating and helping much more decentralized and differentiated actions at the local level than what are currently found in large field bureaucracies. Staff can be taught interview methods such as those for ranking, which induce them to learn from and use the categories and criteria of their rural clients.

Older, senior staff, trapped in the higher levels of bureaucracies in urban centers are often decades out-of-date in their direct experience of rural conditions, apart from what they “learn” through biased rural development tourism and at second or third hand. For them, RRA methods can both liberate and update, through direct, informal contact with rural people.

Dangers of Unsuccessful Initiatives

RRA approaches and methods also have dangers. They could be oversold, too rapidly adopted, badly done, and then discredited, to suffer an undeserved, premature burial as has occurred with other innovative research approaches. They could be used hurriedly, so that RRA becomes no more than a legitimating label for biased and superficial rural development tourism. They could be misinterpreted as a sufficient substitute for in-depth social investigation of rural life and conditions, and so undermine support for the good longitudinal studies that will always be needed. There will always be value in some large, repeated surveys like the national sample survey in India or the extended fieldwork of an individual anthropologist for in-depth comprehensive basic research. But these can now be complemented by the use of the new methods of RRA. Used well—optimizing trade-offs, offsetting biases, triangulating and crosschecking, and learning rapidly and progressively from and with rural people—RRA methods provide an increasingly well-developed, cost-effective, and powerful means for gathering and analyzing social and other data.

Moreover, RRA methods resonate with aspects of the new development paradigm that puts people before things. The contrast between development paradigms is expressed in Table 14-1.

Table 14-1. Physical and Human Paradigms for Development

Aspect	Physical	Human
Point of departure	Things	People
Mode	Blueprint	Learning Process
Goals	Predetermined	Evolutionary
Analytical Assumptions	Reductionist	Holistic
Keyword	Planning	Participatory planning
Locus of decisionmaking	Centralized	Decentralized
Relationship with clients	Controlling, inducing	Enabling, empowering
Methods	Standardized and universally applicable	Diverse, evolved and adapted
Technology for clients	A fixed package of options (<i>table d'hôte</i>)	A variety of options (<i>à la carte</i>)
Project output	Infrastructure	Competence and choice

These contrasts can be overdrawn. Most successful initiatives are a mixture of elements from each. Projects for physical infrastructure will always be needed. They require the application of universal rules, for instance as in building bridges. Precisely because these rules are universally valid, physical projects like bridges are relatively easy to implement. A much greater challenge is presented by projects that involve people, as well as things. As Bagadion and Korten have shown with irrigation in the Philippines in chapter 3, the participatory approach requires a basic shift in norms and attitudes from conceiving just the building of a physical system to developing the social organization capable of using and sustaining the system on a long-term basis. Many other similar cases and arguments for the paradigm that puts people first have been presented and analyzed in this volume.

Conclusion

To put people first, and to put poorer people first of all, requires action to support the organization and empowerment of poorer people to enable them to make effective demands. It requires institutions that are strong and sustainable and policies to support them. RRA, including participatory rural appraisal, is one point of entry among many others.

Even so, by making outsiders more self-critical about what they learn and mislearn, and making their learning more efficient and up-to-date; by making more time for the poorer to be heard and to take part; by encouraging the poorer to participate in analysis; and by bringing senior staff and poor people face-to-face-in ways such as these RRA methods promise an unmeasurable potential for changing behavior, awareness, and policy.

It is the beginning of wisdom to recognize that we, the professionals, are much of the problem and that they, the poorer, are much of the solution. In the late 1980's, these insights became more accepted than they were a decade earlier. In the 1990s, conceptual acceptance can be translated into more systematic action. An

immense inertia of “normal” professional values, rewards, and behavior continues to impede change. This reinforces learning from above, not below, serving the richer, not the poorer, and standardizing not differentiating. Fortunately, we now have, in the growing family of RRA approaches and methods, one means to help reverse these tendencies.

More and more professionals-in government departments, in universities, in donor agencies, and in NGOs-are recognizing and practicing reversals-in putting people before things, in putting the poorer before the less poor, in learning from people and not just teaching them, in decentralizing instead of concentrating power, and in valuing and supporting diversity instead of standardization. The need for putting people first is more and more clearly seen and felt, not just by social scientists but across the whole range of disciplines and departments. RRA has its part to play in reinforcing and spreading this insight and conviction in the movement for sustainable social justice and development. However modestly, it has the potential to help make the 1990s increasingly a decade for reversals, for diversity, and for putting people first. The methods are better known than before. Lack of tools cannot be an excuse. It is less a question of what to do, than one of deciding to do it. Putting people first, and putting the poorer first of all, is now more than ever a matter of personal and professional choice and commitment.

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FITTING PROJECTS TO PEOPLE

N. Uphoff

■ Putting people first in development projects comes down to tailoring the design and implementation of projects to needs and capabilities of people who are supposed to benefit from them. No longer should people be identified as "target groups." Rather, if we must speak of them abstractly, we should consider them as "intended beneficiaries." They are to be benefited, rather than "impacted"¹. In design and implementation we have only intentions, since our knowledge of how to improve the productivity and well-being of the poor majority is limited. We can and should be clear about whom we expect to benefit, and how, but we cannot be certain our efforts will bear the desired fruits until the processes of economic and social change have been put in motion. Fortunately, some of the unanticipated outcomes can be favorable. The probabilities of gaining momentum, rather than losing it, in the course of carrying out projects should be greater to the extent that the mode of design and implementation reflects a "learning process" approach². This should enlist the participation of intended beneficiaries as much as feasible in all aspects of project operations.

This chapter considers some actual project experiences and establishes how development expenditures are likely to be more worthwhile to the extent that projects are planned in ways that involve the intended beneficiaries in decisionmaking, implementation, evaluation, and of course benefits³. First I review experience with three rural development projects in rather different developing countries. These projects were planned with little input from the intended beneficiaries, and the ensuing problems and insufficient results derive from the top-down approach taken. In various ways the projects have been modified to become more open to people's participation, and progress has become more satisfactory⁴. This demonstrates that projects should be fitted to people.

Some general conclusions about what people can contribute to the planning and implementation of projects are then drawn from varied field experiences and recent developments in social science research and thinking on participation.⁵ Also discussed is how, with the benefit of sociological theory and administrative practices, projects can be better conceived and carried out to put people first.

Problems with a Nonparticipatory Approach

To understand better what is likely to happen when people are not put first and when project design proceeds in more technocratic ways, with assumptions that technicians and administrators not only know best but know enough, consider three integrated rural development projects in Nepal, Ghana, and Mexico.⁶ The countries themselves are drawn from Asia, Africa, and Latin America and represent quite different levels of economic and administrative development. They fall in the bottom, middle, and top third of developing countries according to per capita income- World Bank figures show them to be, respectively, seventh, forty-first, and seventy-first from the bottom out of ninety countries.

Three Rural Development Projects

All three projects were funded in part by loans from the World Bank, and its staff played a role in their design. It should be under-

stood that these projects were for their time relatively innovative and thus deserve some credit even if they were less successful than desired. Knowledge concerning participatory modes of development—including the desirability of promoting them and the steps involved—has much advanced since the early or middle 1970s when these projects were initiated. It is easier to display hindsight than foresight when pointing out problems in the approach and results, and I take no satisfaction in making critical appraisals. The purpose is to highlight experience in a way that enables us to learn from it, so that foresight in design and implementation becomes clearer.

NEPAL. The first project to be considered is the Rasuwa-Nuwakot Development Project in Nepal. The project loan of \$8 million was to improve an area covering 29,000 families in the two districts of Nuwakot and Rasuwa north of Kathmandu. The project included intensified agricultural extension work with improved crop varieties, farmer training, marketing, and research; livestock development; irrigation extension; improvements in the availability of agricultural inputs; control of soil erosion; health centers and village water supplies; trails and bridges; and cottage industries. It was assumed that participation, in implementation if not planning, would flow through the panchayats (the partyless local government system) following procedures for decentralized planning laid down in the District Administration Plan of 1975. These local institutions have now been abolished in part because they were unrepresentative of people's interests.

The area is noteworthy for its extreme poverty and the extremely poor transportation and communication infrastructure serving rugged mountain areas. An average family landholding is 0.6 hectare scattered in five pieces. Income is so low as to have little meaning in monetary terms. Food production covers only two-thirds to three-fourths of consumption, and one-third of adult males must migrate out of the area during part of each year to add to family income. The people are, in spite of or because of this, very hardworking and enterprising, extracting an existence from an environment distinguished for its beauty and its penury.

Even a critical reviewer of the project describes it as a “new and important landmark in the history of rural development in the country”.⁷ Other agencies have encountered similar or greater problems in rural development projects in the hills of Nepal, but many problems in the design and implementation of this one could be traced, in the words of a Nepalese government official, to the “lack of participatory process in plan formulation.”

The existing planning procedures for the project are not based on the understanding of the critical ingredients of participation, namely participation in decision making, participation in implementation, including resource mobilization, participation in benefit sharing, and participation in evaluation. Where the villagers undertook projects on their own, such as the forest regeneration project in Belkhot Panchayat discussed earlier, the participation of the local people in terms of all these dimensions was total. But when it came to the planning of activities under the [World Bank] project, their participation was only partial and limited to the need identification and subsequent implementation of a few rural works projects such as drinking water, suspension bridges, [and so on.] In most other sectoral activities, the participation of the people at the village level was simply nonexistent.⁸

The project staff, however, were satisfied if they could get the district level panchayats somewhat involved in planning and implementation despite the limitations and social biases of these institutions. (The issue of village-level participation will be discussed below) Some of the experience of this project has been encouraging, at least in communities where there was active participation.

GHANA. The Upper Region Agricultural Development Project in northern Ghana was planned for the same length of time and same period as the Nepal project. It was much larger, however, with a loan of \$21 million to be applied to a region covering 10% of Ghana’s population (125,000 families) and 40% of its cattle. Ninety Farm Service Centers were to provide extension and management services to farmers, and there would be loans and inputs to improve

production on 118,000 hectares. In addition to projecting huge increases in the yields of traditional crops, the planners expected to increase livestock production with the establishment of ten 2,000-hectare ranches. Agricultural research was to be strengthened, seed production was to be increased, and a pilot adult literacy scheme was planned. Both health and nutrition components were designed, and small-scale irrigation and soil conservation activities were to be augmented.

This complex of activities was to be undertaken in the poorest and most remote part of Ghana. The Upper Region has much in common with the Sahel, and its inhabitants are afflicted by a long, harsh dry season each year. What needs to be done to improve the people's livelihood is fairly obvious, but how to accomplish this is not. The soils are poor, the level of literacy very low (10%), and parasitic and other diseases are endemic. The traditional sociopolitical structures persist, though they are changing in response to influences from the state, the market, and the world culture.

The project design effort was not very protracted or participatory, certainly less so than in retrospect the situation warranted.⁹ Farmers were to be represented at the highest levels of project management, and farmer groups were to be involved in the credit and agricultural improvement activities. But neither provision was part of the initial design or implemented satisfactorily. Subsequent efforts moved in the direction of broader farmer participation, with some encouraging results. Certainly any project as large and ambitious as this one will encounter some problems and misunderstandings. The question is whether more involvement of farmers and other rural residents could have reduced mistakes in project planning and facilitated implementation once the project was under way.

MEXICO. Of the three projects, PIDER in Mexico is the largest and most ambitious project, planned to affect 22% of the rural population and half of the rural poor in identified "microregions". The first phase (PIDER I) began in 1973 and was expanded in a second phase (PIDER II) contemporary with the projects in Ghana and Nepal. This

has been succeeded by PIDER In. For the 1977-82 period, planned investment was \$700 million, of which 25% is covered by a World Bank loan. Inasmuch as PIDER was conceived as an investment program for rural development rather than as a conventional project, its approach has been more open-ended, with less advance specification of program content and technologies. This leaves more scope for working out details in some consultation with the affected population.

Initially PIDER adopted a fairly conventional style of operation, although its organization was innovative. A fairly small staff in the president's office coordinated the investment program, which was implemented by nearly two dozen government agencies with a staff of 3,000 professionals. One objective was to get regular line ministries and corporations working more effectively with the rural population. The initial approach to the people was, however, as paternalistic and technocratic as was customary with these agencies.

World Bank appraisal materials for PIDER II strongly emphasized the need for community participation:

There has been increasing recognition of the importance of participation, not only to give more decisionmaking influence to program beneficiaries, but also to ensure that the program infrastructure and services achieve their original intention. The real participation of village groups in investment programming and decisionmaking continues to be limited. PIDER, however, is now involved in various special programs to increase beneficiary participation in both the programming and execution of the program. PIDER staff have become increasingly concerned that unless there is real participation in all phases of the program, the potential for proper operation and maintenance of the program investments will be greatly reduced.

PIDER differs from most other projects in the amount of attention methodically devoted in recent years to making the process of investment planning and implementation more genuinely participatory.¹⁰ This reorientation, as the statement just cited suggests, has grown out of the initial experience of PIDER.

With large sums of money at stake, it is understandable that in each of the three countries there was a great hurry to prepare and implement the project as quickly as possible. But each project had a number of problems, almost in proportion to the extent that it was introduced without substantial local participation. Because each project was complex, with many components, it is not surprising that various faults in formulation are noticeable. Contributing to the problems were inefficient technical approaches, missed opportunities, exaggerated expectations, insufficient preparation in the countries themselves, and the speed with which project formulation was undertaken, especially in the hills of Nepal and the savanna of Ghana where data are scarce and proven technical solutions even scarcer. Since the governments had limited expertise and capacity, solutions were often sought from the outside rather than by working closely with the rural population in an inductive manner. Nor were the ideas of field-level government staff mobilized as they might have been in a more participatory process although the experience and suggestions of staff could have helped make the investment more cost-effective over time.

Project Components

It is true that projects have to be formulated and designed within the framework of existing government structures and procedures. Still, the justification for most projects is that they introduce innovations. World Bank staff commonly say they cannot and should not impose new approaches on the government in Bank-funded projects, yet many local project staff feel that innovations are financed only if they are favorably assessed by Bank economic and technical experts. The situation is similar for other donor agencies as well.

In view of the experimentation with rural development initiatives in other parts of Nepal and the ineffectiveness of conventional approaches, it is striking how little institutional innovation was supported in the Nepal project. Health service delivery was through standard (and passive) health posts which have a spotty record. No apparent consideration was given to the use of paraprofessionals and

community participation to get more active health programs as was done by another donor with the Ministry of Health.¹¹ The forest development strategy was to hire guards and erect fencing, even though cheaper and more effective community based forestry programs were known.¹²

The water supply component, one of the better parts of the projects, was built on the construction strategy begun by the Local Development Department. Contributions of labor and available material from the community were augmented by cement, pipes, and the like from UNICEF (United Nations Children's Fund), with financial and material support from the central government. Agricultural credit was channeled through the government-directed village cooperatives (*sajha*). This appeared to incorporate a participatory dimension to the project, but in reality it did not, because of the social biases and poor performance of these groups.¹³

In Ghana some of the agricultural technologies chosen were rather inappropriate, though to its credit the project did not promote tractorization, which is not only economically inefficient if government subsidies are taken into account, but also agronomically dubious.¹⁴ The project appraisal correctly labeled tractorization as a "modern and expensive form of shifting cultivation." The intermediate technology of bullock plows was not thought through economically, however. Since a plow cost twenty-four times the average per capita cash income in the area and two-thirds of the farm households did not have bullocks, the innovation was beyond their capacity.¹⁵ The heavy emphasis on the use of chemical fertilizers was also questionable.

I do not have any data on similar shortcomings in the formulation of the PIDER project, though there might have been some. Because the project was more open-ended, it was apparently less prone to get locked into inappropriate technologies or misdirected service delivery mechanisms.

Agricultural Targets

The agricultural projections made by all three projects were less than realistic, and their accuracy could have been increased by con-

sultation with farmers. The Nepal project's own data showed that yields of the four major crops had been declining over the previous five years in the two districts (except for wheat in Nuwakot). Nevertheless, the planners predicted that within just four years yields would increase 50% to 100% with the use of fertilizer and 19% to 38% without. (The lower figure was for rainfed areas, the higher figure for irrigated areas.)

In Ghana the plans assumed that in just five years, with only the improvement of small dams for minor irrigation, yields would go up by 113% for subsistence crops⁶. The area planted in improved or advanced varieties was expected to go from 25,000 hectares preproject to 133,000 hectares in five years, which implied an annual increase of 40%. PIDER had somewhat less exaggerated expectations of "full development" within six years, when yields of rainfed crops (corn and beans) would be up by 50% to 67%, while irrigation was expected to boost yields as much as 100%. Such increases were based on experiment station results, not on experience in farmers' fields, and were, predictably, not achieved.

I point to these figures and to the deficiencies in project formulation to suggest that more realistic and beneficial projects could have been formulated by engaging the experience and ideas of farmers and technicians working in the project area. To plead that this might take "too much time" is to assign no cost to the inefficient use of resources because unrealistic components of a project have been approved.

Technical Choices

It is not the function of the sociologist to point up faults in the technical design of a project, but some problems have come to light in the projects under consideration with respect to technology. One common failing of many project designers is to underestimate the technical knowledge of local people, which social scientists could bring out. This was pointed up in one of the villages in Nepal where a check dam was to be built.

Although this project was undertaken for the benefit of the local people they were little involved in its planning. When the time came for implementation, the local people wanted to have it built on a [stronger] foundation... [which] was not included in its design and estimate, and so the request was not complied with. Even the gabion wire mesh was made by labor imported from India which local people could easily have made or been trained to make. As it turned out, in the last monsoon, the dam gave in at the base, thus confirming the apprehension of the villagers, who now want a new one built in its place.¹⁷

More serious problems of design can be identified in the Battar irrigation scheme, which was a costly part of the Nepal project.¹⁸ This was a marvel of engineering design, involving lift pumps and piped water to supply each of the 120 individual 2-hectare units. It would give precise water control to farmers provided they had electricity. Farmers told a visiting USAID official in 1977 that they would have preferred to use a gravity flow system with technologies they knew and could manage themselves.¹⁹ As the farmers had feared, the water supply was interrupted whenever hydroelectric power was diverted to Kathmandu. Moreover, farmers pointed out that the system of piping water to the field did not allow the cold river water to warm in the sun, as happens in a gravity-channel system, and the crops do not do as well because of the differences in water temperature.²⁰ Since farmers were given no voice in design decisions, their farm operations suffer.

One cannot assume that rural people have all the necessary technical knowledge to make sound design judgments in every case. But neither should it be assumed that those who live in the environment and know it intimately have nothing to contribute. The attitude of the project designers in Nepal toward farmers is indicated by this statement: "Following review within [the central government] and decision on the form of organization to be adopted, there would be a short public information campaign to advise the farmers of what is intended and ensure their willing [sic] participation".

In Ghana, the “contact groups” designed to transmit technical advice to farmers included no women, even though women do a large share of farm work.²¹ Social factors were also ignored in the design of PIDER’S livestock development component. Conflicting interests between those who own cattle and those who do not would predictably affect the extent to which the two groups cooperated, but this was not considered. Consequently, fences were broken, pastures destroyed, and regulations could not be enforced. The factors overlooked in planning, one might say, took revenge. In this project, appropriate measures would have involved landless laborers in the cattle development planning process.²²

The design of the irrigation component in PIDER, having paid little attention to land tenure, turned out to polarize incomes. Although some differentiation of incomes may have been unavoidable, the design could have focused on complementary income-generating activity elsewhere so that the irrigation component would not be so unbalancing.²³ In recent years, the World Bank has become more concerned with assessing the implications of land tenure for the distribution of project benefits, but such assessment is subject to the availability of reliable socioeconomic information.

Implementation

In implementation, all three projects encountered problems of coordination and delay, some of which could be attributed to the way people were left out of the design phase. In Nepal, two-thirds of the way through the project period, only 22% of planned funds had been expended, and most of this had been on the “easy” part: vehicles, equipment, buildings, and the like. At the end of the fourth year (80% of project period), project expenditure was 52% of the planned amount. One reason for this was the overcentralization of the implementation process, most of it directed from Kathmandu. There was too little opportunity to make appropriate changes, additions, or deletions to the plans in the field. Though district-level planning was written into the project, it was not effectively activated.²⁴

The situation was worse in the Upper Region of Ghana, where the lack of consultation in the design process contributed to a lack of integration and to inordinate delays. The Departments of Rural Development and Cooperatives had been only marginally involved in planning. Even the core activities of irrigation, mechanization, and seed production were not integrated in the project. After two years, the Agricultural Development Bank had not made a single loan to small farmers.

With some effort, 108 contact groups of farmers were finally formed in 1979 to test new technology on trial plots and to get loans. But work was delayed by bureaucratic wrangling between the Project Management Unit and the Farmers' Services Company (FASCOM) over who should authorize loans. By the time the dispute was resolved, more than half the groups had broken up, judging that the bureaucracy was up to its "usual tricks".²⁵ Neither the Project Management Unit nor FASCOM was really accountable to farmers. A new effort in 1980 to set up Farmer Committees was reportedly more successful.

The PIDER project has made a detailed analysis of the reasons for its shortcomings. It found 40% of them were due to lack of coordination and complementary investments, 30% were due to lack of technical assistance, and 15% each were due to lack of beneficiary maintenance and poor initial technical design. These findings indicated that PIDER management needed to strengthen coordination: "emphasizing improved local-level programming and continued efforts to reorient the way participating agencies interact with beneficiaries at the grass root level".²⁶

The following strong statement in the project appraisal for PIDER is attributed to the research center (CIDER) which had been monitoring project implementation: "CIDER insists that the root cause of poor operation and maintenance is the lack of small farmer participation in the early stages of programming." This view reflects the fact that problems were observed in some project sectors and relatively greater success in others. In particular, road building stood out as an

area of accomplishment of the PIDER program. Village road committees introduced much more community participation in road building and maintenance than in other PIDER activities. The length of roads in the microregions was increased from 25,000 to 100,000 kilometers in six years. Moreover, good maintenance through community participation was reported by CIDER after surveys in the microregions. In contrast, the water supply systems were less effectively installed and maintained because of having been introduced in a technocratic manner.²⁷

PIDER, CIDER, and their World Bank collaborators have been attempting to develop and institutionalize methodologies for participation, although some of the bureaucratic line agencies in Mexico are reluctant to empower local organization.

Different Kinds of Participation

There are many possible kinds of participation, and who participates and how may be more crucial to project success than any purely quantitative expression of participation. Researchers can reasonably disagree about what is to be considered "participation," but it should be possible to assess the results of different approaches, assumptions, and mechanisms. Without setting up any absolute standard for judging participation, we can see that these projects tended toward what might be called "pseudoparticipation," although there is also evidence of a few genuine and productive approaches. Readers can use whatever definitions and criteria they like to assess the experience of these projects.

NEPAL. Interestingly, the appraisals of both the Nepal and Ghana projects acknowledge the willingness of farmers to innovate. The Nepal appraisal documents emphasized:

Despite isolation and life at subsistence levels, villagers cannot be called "conservative." They generally understand the importance of innovations—improved seed types, use of fertilizers, and acceptance of new crops (wheat). Furthermore, there are

no dietary or customary obstacles to innovation. There is recognition of the need for formal education of both sexes. Villagers are keenly aware of their needs and have their own priorities. In a brief and limited survey of villages the expressed needs, in order of priority, were: (i) drinking water supplies; (ii) better irrigation/more water; (iii) improved seed and better supply of seeds; (iv) improved trails and more bridges; (v) potatoes; and (vi) sheep. These priorities were further expressed in a memorandum "Requirements for Development of Nuwakot District," prepared by Village Panchayats and presented to the District Panchayat. In practice, however, the acceptance of innovations has been limited and temporary. The general peasant attitude to government and governmental programs is one of distrust and suspicion. The most important reasons are: (a) The discontinuity and failure of government programs. Seed supply programs have been irregular and different types of seeds have been supplied on each occasion; (b) Lack of trained personnel who are adequately remunerated; (c) Lack of awareness and non-communication of programs.

The reasons cited for "limited and temporary" acceptance of innovations by villagers have little to do with the villagers themselves and rather more to do with the government's performance. Yet in spite of this, the project was designed to depend entirely on government personnel. In the project design the planners claimed to be taking social factors into account by decentralizing government services to sub-centers-several different training centers and seed and livestock exchanges. But saying that "more effective development of the Panchayat system [would be encouraged] to allow greater participation in project development" was no more than a bow toward the concept.²⁸

To be sure, if the panchayat system were to take on more responsibilities it could possibly facilitate participation, but the very way government planners conceived of panchayat involvement made it unlikely that independent initiative and ideas would be fed into the process. Various infrastructure construction plans were to be placed before the

District Assembly "for information," but only those to be financed out of local resources would require approval by the assembly.

This provision of a minimum level of necessary participation in decisionmaking-if local resources were to be forthcoming-appeared to be more a matter of ratification than of formulating and making decisions. Shrestha says of such exercises: "At the district level, too, the participation of the people represented by the district panchayat was only of dubious validity. In most cases targets were already approved and included in the national programmes and budget requests of the sectoral ministries even before they were presented to the district panchayat or its committees-a *fait accompli*".²⁹

A realistic rejoinder could be that the panchayats were not representative of the majority of interests in the rural areas in any case. The small farmers, the landless, the lower castes, and tribal populations, not to mention women, were greatly underrepresented.³⁰

The main role of the World Bank was to provide financing, so it could not implement the project outside the government's framework. But greater sensitivity to existing biases in decisionmaking and benefits would have been in order for the team which prepared and designed the project before appraisal. Some efforts could have been made to support more participatory institutions complementing the panchayat system. At the same time as the World Bank project was being implemented, the FAO in cooperation with the Agricultural Development Bank of Nepal was introducing multipurpose development activities in the project area through the Small Farmer Development Program (SFDP).³¹ These activities were clearly more effective than, and were subsequently incorporated into, the World Bank-assisted project.

The staff responsible for the project were not opposed to participation. Rather, they assumed that working with the district panchayat-on their own terms, to be sure-provided adequate participation. Village panchayats were asked to submit plans, but since they were

given no control over resources, their plans amounted only to shopping lists. Village proposals were integrated into a district plan by the project coordinator's office in Kathmandu for approval by the district panchayat. The competence and commitment of panchayat leadership certainly varied from one place to the next (as did the caliber of government officials who would implement the project's activities if local bodies did not). The project staff found that in about half a dozen cases, where supportive local leaders headed village panchayats, participation was "fantastic" and implementation of activities went "like wildfire".³² More of such participation would have been welcome, but the lack of responsible initiative was seen as the fault of lagging rural communities, and not as related to the attitudes and practices of the project staff.

GHANA. The initial approach to participation in Ghana was less substantial than in Nepal. To be sure, the appraisal materials indicated that the Upper Region's population would benefit from "increased farmer participation in local development and decisionmaking." Such language is encouraging, but the mechanisms for this participation were extremely limited. The appraisal materials acknowledged the willingness of farmers to be involved in agricultural improvement:

Previous development work has shown that farmers are willing to adopt new practices which offer real benefits; there is already an established trade in purchased inputs in the Region. Immediate production improvements are expected simply from a wider distribution of goods and services in the Region; thereafter improvements would be sustained through demonstration, instruction, and deliberate concentration of technical and managerial research into problems confronting the smallholder.

Yet the role envisioned for the smallholder was passive rather than active: "Farmer contact and market penetration would be achieved through a series of retail ventures operated at strategically sited service centers, from which extension staff would also operate... It is expected that service centers would become focal points of agricultural and farmers' association activity; site selection and demarcation would be made on this premise".

Unfortunately, the farmers' associations referred to were not implemented from the outset. When contact groups were finally set up instead, they were treated so cavalierly that over half disbanded. Those which remained were essentially one-man contact groups, each a single "progressive farmer" or "opinion leader", as extensionists referred to them. When queried about the advisability of channeling all information and inputs through (and maybe to) only one person, a district officer responded: "This is the way we have always done the job".³³

The project formulation was not hostile to participation, merely unrealistic about what would constitute this. It started from the premise that "expert and experienced direction and management would be imperative from the outset". To this it added that "some form of active farmer participation [was] also desirable in order to provide a constant spur to management and clientele. Ideally this should be attained through both equity [financial] participation and Board representation." However good this sounds, these two kinds of participation were set up in extremely truncated form.

"Equity participation" meant building up mandatory farmer shares in the Farmers' Services Company (FASCOM) through a compulsory 2.5% markup on the prices charged for all farm inputs. The shares would be held in trust for the farmers by the Bank of Ghana. It was assumed that since all recipients of inputs could be identified, dividends could eventually be made payable to individuals or groups of farmers. It was expected that in five years farmers' equity would have reached 12% of issued capital and that, as one appraisal assumption put it, control of the company would "one day" fall into the hands of the farmers. So much for "active" farmer participation.

The board representatives referred to were three farmers (out of thirteen members) on the FASCOM Board of Directors. These farmers were appointed by the project manager, though eventually they were to be elected by shareholding members of the farmers' association. The scope for popular input into decisionmaking in such bodies was slim. FASCOM was permitted to provide inputs only to those farmers

approved by the project's technical staff. Such a restriction was understandable to prevent inputs from being resold or smuggled out of Ghana, but it cut out farmers' responsibility for managing resources since they had no say in something as basic as eligibility for services or loans. For the first years of the project farmers were represented on the FASCOM board but not in managing the Farmer Service Centers, which were much closer to the farmers' situation. Farmer members of the FASCOM board expressed embarrassment over how little input they were able to make to project decisions.

The farmers' associations spoken of in the project documentation did not get set up until 1980 when forty-two Farmers' Committees were established to give users some voice in decisionmaking for the Farmer Service Centers. The pilot attempts were judged successful, with a tremendous turnout of farmers; service center facilities were even constructed by farmers rather than by contractors as previously planned. This recast the whole approach to farmer participation, which was earlier conceived as furthering project goals more than farmers' interests.

A strategy of farmer participation without an organizational base is dubious, as was eventually realized in the project. The original design combined grandiose agricultural plans with minimal organizational ones, which neglected the most elementary principles of sociological and psychological analysis.

Although more participation by farmers in project design is not guaranteed to produce a more implementable and beneficial balance, it would probably have made the project more realistic and increased the people's commitment to it. As the project was formulated, it was unlikely that any project manager or technical staff could have made it succeed along the lines laid out.

MEXICO. The approach to participation taken in the PIDER project was not initially much better than that found with the other two, but the question of increasing local participation and making it more effective was taken seriously as ongoing evaluation studies by CIDER

revealed problems with the initial approach. Although there have undoubtedly been some lapses and shortcomings, the participatory procedures have been tested, revised, and formalized to replace the imposition of programs from above with a system providing for an element of bottom-up planning.

Some of the approaches to fostering participation prescribed even in the formulation of PIDER II proved misdirected. Since most of the rural poor lived within ejidos (communal organizations established after the Mexican Revolution), the Department for Organization and Development of Ejidos (SOFE) sent out multidisciplinary brigades, so that ejidos could be involved in detailed planning of new investments; that way, they could participate in all new PIDER construction and share equally in all benefits. Unfortunately, SOFE staff did not involve campesinos fully in the process of planning PIDER investments. Staff members, coming fresh from the university, had difficulty working with campesinos and adjusting to the conditions of poverty and isolation they were encountering. Also, the staff did not get cooperation from other government departments, so this attempt to promote participatory development, despite the intention expressed by PIDER management and the fine language of the project documentation, was largely ineffective.

The Agrarian Reform Secretariat staff tried to involve campesinos in PIDER activity by working through local authorities such as municipal chiefs, teachers, and ejido presidents. It was assumed that local leaders would generate community participation as well as provide an independent link to the state-level technical secretariat. The interests served by this kind of "link" need to be examined, since consistent evidence suggests that many such leaders use their connections more for self-advancement than for community benefit.³⁴ The new methodologies developed by PIDER and CIDER were supposed to offset this by wider consultation within each community.

One approach used was to select activities on the basis of petitions, primarily from elected leaders and not through village assemblies:

These petitions were assessed and investments then selected in light of their technical and economic feasibility, and in view of existing financial constraints.

The initial "petitioning process" has not involved all the groups and strata in the villages (particularly the poorer ones). It has also suffered in particular from not following the procedure of integrating the final list of projects selected by the PIDER staff within the context of beneficiary priorities (stated explicitly) and within an explicit village-level and intra-microregional development strategy.³⁵

Accordingly, the framework now outlined for planning from below stipulates more face-to-face contact with a full range of community members, not merely consideration of petitions received.

The emerging methodology requires technical staff to start the program design process by leaving their offices, rather than letting all community contact go through lower-status extension agents. The three stages are: diagnosis of local problems with the community participating; preliminary programming of investment projects, which involves discussion among many parties including government agencies; and final programming, at which stage agreements are reached among all concerned. Meetings are to be held with the whole community to identify problems, make suggestions, and set priorities for action. Staff are told to grasp and explore relationships among different groups within the community, and to recognize differences in interest and capability among them. They should talk with small groups to elicit ideas from the reticent members and check out problems and solutions with the evidently disadvantaged.

The guidelines and procedures eventually formulated state that there is to be self-definition of interests by community members and that officials are not to be regarded as the interpreters of farmers' interests. Moreover, the community assessment should actively seek out various sets of interests, not listen to only a few leaders or take

the first investment ideas proposed. There needs to be a thorough diagnosis of each community in its own terms. Following this is an iterative planning process in which complementarity and integration of activities is sought.³⁶

One limitation is that this process still “does not promote stable forms of peasant self-organization, which would themselves mobilize and support the active involvement of peasant groups in development activities.” Cernea elaborates on this:

The community meetings organized by PIDER programming teams with various segments of the village population are a useful, but only transitory, short-lived form of group action. Between the meetings that take place in the diagnosis stage and those in the final programming stage, there is no permanent structure of group action generated by PIDER in the target communities. The social structure that emerges in the process of interaction between the planners and the local community is not maintained and sustained after the field team departs.

Participation must be self-perpetuating, not dependent on visits by outsiders. To sustain participation in the long run, PIDER should explore ways to help build more stable social-organization structures within the peasant communities. Such structures would be a powerful means both in fostering peasants’ participation in government sponsored action and in supporting peasant groups’ organization for more efficient production and marketing activities.³⁷

Unfortunately, government agencies have shown little enthusiasm for establishing any broadly based or multifunctional local organizations.

Organizations such as village road committees or self-help groups organized through ejidos are acceptable, but any more ambitious and mobilizing institutions are discouraged by most officials.³⁸ This represents a limitation, but as long as specialized functional organization is possible, there seems good reason to proceed with it.

The emphasis in the emerging participatory methodology for PIDER on reaching out to and listening to the poorer strata of the rural community is a welcome advance. This is one reason PIDER holds out more promise of contributing to broader-scale rural development than do the other two projects. It offers more than resources or technology to the poor majority and offers them some voice and some channels for improving their lives. This is a stimulus to development too often neglected.

Notes

1. For a more-detailed description of the pathology of rural development tourism, and its antipoverty biases, see Robert Chambers, *Rural Development: Putting the Last First* (Harlow, Eng.: Longman, 1983), pp.10-26, and Mick Moore, "Beyond the Tarmac Road: A Guide for Rural Poverty Watchers, in "Richard Longhurst, ed., "Rapid Rural Appraisal: Social Structure and Rural Economy", "IDS Bulletin, vol. 12, no. 4" (1981), pp. 47-52.
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7. See, for example, Steven Franzel and Eric Crawford, "Comparing Formal and Informal Survey Techniques for Farming Systems Research: A Case Study from Kenya", "Agricultural Administration", vol. 27 (1987), pp. 13-33.
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9. See Khon Kaen University 1987, and George W. Lovelace, Sukaesinee Subhadira, and Suchint Sumaraks, eds., *Rapid Rural Appraisal in Northeast Thailand: Case Studies* (Khon Kaen, Thailand: Khon Kaen University, 1988); the Sustainable Agriculture Programme of IIED had by 1990 published a substantial series of reports and monographs on rapid rural appraisal and agroecosystems analysis conducted in countries including Ethiopia, Fiji, India, Pakistan, Sudan, and Zimbabwe; written by Gordon Conway, Jennifer McCracken, Jules Pretty, and Ian Scoones. IIED produces RRA Notes, an informal bulletin available free of charge on request- the bulletin was so heavily supplied with material that six issues were published in the first year.

10. Rosalind Eyben, "Rapid Appraisal in Non-formal Education: An Account on an On-going Research Experience with a United Nations Project, " paper to the Conference on Rapid Rural Appraisal, at IDS, University of Sussex, December 4 7, 1979.
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19. Anil Gupta and IDS Workshop, "Maps Drawn by Farmers and Extensionists", in Chambers, Pacey, and Thrupp 1989, pp. 86-92.
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INSTITUTIONAL CONSTRAINTS ON SUSTAINABLE RESOURCE USE: LESSONS FROM THE TROPICS SHOWING THAT RESOURCE OVEREXPLOITATION IS NOT JUST AN ATTITUDE PROBLEM AND CONSERVATION EDUCATION IS NOT ENOUGH

G. Honadle

■ Long-term access to natural resources is a problem for humans because current and past human actions have depleted those resources. The natural resource crisis results from human behavioral excesses of reproduction and exploitation. Recognizing this places social and institutional factors at center stage in discussions of sustainable resource stocks.

These two types of factors are often reduced to a problem of inadequate knowledge - if only people knew what they were doing, they would stop! And this problem statement translate into "conservation educations" as the key to the solution. But experience with international development efforts suggest that this approach is inadequate - the gap between knowledge and behavior is wide, and it is the behavior that is the key.

This chapter explores some of that experience and suggests an alternative to the knowledge hypothesis. The perspective is that people respond to incentives for behavior that improves their survival chances and that a combination of economic market forces and bureaucratic policies, rules, and structures creates those incentives. This is where attention must be focused if sustainable societies are to be built.

These examples make the point. A Philippine fisherman is destroying the coral reef that provides habitat and cover for the fish he harvests. He knows that his success in the present is dooming the fishing of the future. But, as he informs us, "I need the money now; what is the alternative?" In the second case, an Indian forester is taking bribes from villagers to allow them to keep "their" trees that the law says belong to the state. He knows that this is hindering the performance of the forestry effort, but his pay is so low he cannot live on it. This is his major source of income. What is he to do? In the third case, a farmer in Ecuador wants to establish a claim to forest land. To do this, the law requires him to fell trees and clear the land. So, even if he would prefer to keep some of the land forested, he is forced to remove the cover. And these cases are little more than the tip of the iceberg.

Population growth, market dynamics, and institutional parameters have created situations where exploitative behavior is rewarded and sustaining behavior is discouraged, even when ideologies proclaim the opposite. To understand how this happens, one must examine the causes of tropical deforestation and then identify institutional factors entangled in those causes. This may provide some insights into pitfalls and possibilities awaiting the promotion of sustainable forestry in North America.

THE PROBLEM OF DEFORESTATION IN THE TROPICS

The causes of deforestation are twofold. First, there are fundamental, or indirect, causes operating worldwide. Second, there are direct causes emanating from the fundamental ones and operating locally. The importance of specific causes will vary through space and time, but an overview of both is needed as background to an examination of the institutional dimension.

CAUSAL FACTORS

A fundamental and well-recognized cause of tropical deforestation is the increase in human population in tropical areas. This growth pushes people into more and more marginal areas in the search for

land for food production. The edges of the forests thus are nibbled away by small parties or leveled on a larger scale by public or private settlement schemes.

Further inroads occur in the search for household fuelwood and home stead construction materials. The need by ever-increasing population for cooking and heating fuel has led to a widely recognized fuelwood crisis in the Third World. This crisis involves both the rural folk and the larger and larger clusters of urban populations.

These urban centers also create demands for more sophisticated energy types than wood to burn. Hydroelectric project to feed the energy needs of growing industries and cities can flood vast tracts of virgin forest in a short time.

A second fundamental cause of deforestation is the penetration of international markets into Third World economies. Demand for forest products and alternative uses of forested land exert a pull on Third World people and their resources. The global village may be in the making but the global marketplace is already here.

There are numerous manifestations of this phenomenon. The developed world's demand for beef has resulted in the clearing of forests for cattle production as Third World entrepreneurs respond to opportunities to make quick gains. Latin America has especially felt this influence.

The North American demand for fruit or for cheap and tasty cooking oils in the fast food industry has led to the clearing of complex, multi-species hardwood forests and their replacement by monoculture plantations of oil palm or citrus. The Ivory Coast is one example of this phenomenon. Another is Malaysia, which in the last decade has established itself as both the major world palm oil supplier and the primary source of genetic improvement in oil palm.

The hardwood themselves are also sought by the industrialized nations for their own purposes. The Japanese extraction of hardwood

from the forests of Papua New Guinea provides one example, but the phenomenon is limited neither to one industrialized country nor to one area of the globe.

In some African countries the tobacco industry is the major earner of foreign exchange for the local economy. It is also a major user of wood fuel for the drying process. Thus, smoking is harmful to the health of the indigenous forest.

A fifth example of international market penetration that threatens the tropical forests in the trade in illicit drugs emanating from South America and from Asia's "golden triangle". Forest clearing for coca or poppy production is a significant contributor to deforestation in some countries.

The sixth market-based cause of deforestation involves the industrial demand for precious and valuable metals. Mining often results in the total alteration of the earth's surface at the point of extraction, as well as downstream pollution of rivers, wetlands, estuaries, and coastal resources such as mangrove forest. Human warfare, which can be the extreme manifestation of market penetration, often demolishes forests as nations or groups establish control over territory or resources.

The view above, of two primary causes - population growth and market penetration - resulting in nine major secondary factors leading to tropical deforestation is represented in table 1. This depiction is not meant to be totally comprehensive; rather, it is indicative of the relationships among major primary and secondary causes of tropical deforestation in the latter part of the twentieth century.

First, as the table suggests, it is possible to take aim at the primary causes - population growth and market penetration. Family planning attempts to limit the demand for children as a way to lessen the push factor. Likewise, international conventions, trade barriers, and education campaigns in First World markets can aim at reducing the demand that pulls the carpet out from under the tropical forest. In fact, if population growth and market penetration were both checked, most of the other problems would wither away.

Table 1. Relationship of Primary and Secondary Causes of Tropical Deforestation

Primary Causes (Indirect)	Secondary Factors (Direct)
Human population increase	Forests cleared for food production and settlement Trees cut for household fuelwood and construction Hydroelectric projects flood forests to meet energy demand
International market penetration	Forests cleared for beef production Hardwoods extracted from forest Monoculture plantations replacing forest Wood used for tobacco drying Forests cleared for drug production or warfare Mining operations altering the landscape

INSTITUTIONAL COMPLICATIONS

Institutional factors complicate attempts to deal with these causes at three levels. First is the international level. For example, the debt crisis adds another dimension to market penetration by raising the pressure to use the forest as a foreign exchange mine. Thus, two contradictory messages are sent across the international channels. One says “adopt policies of fiscal responsibility, tighten your belt, unleash the private sector, and pay back (or at least service) the debt.” This means focus

on the short-term structural adjustment. Another message says "focus on long-term sustainable development and do not deplete the stock of natural resources - don't mine the forest."

Thus, international development and conservation agencies are often at odds with international financial institutions. It is harder to protect wildlands when exchange rates are dropped, requiring more exports to earn equal amounts of foreign exchange, or when public bureaucracies are cut back, weakening the institutions responsible for protecting and managing the forest resource and regulating the activities of those determined to mine it. Contradictory international institutional agendas make it difficult to address some of the factors causing deforestation.

Second, at the community or subnational level, social institutions complicate the picture. Inequitable landholding intensifies resettlement and forest clearing by protecting estates for the few while pushing the many to the margins. Political systems that have been captured by the wealthy can be driving forces in forest destruction. Alliances between local politicians and international agencies or merchants sometimes result, making solutions more elusive.

Moreover, the general tendency over the last two decades to bypass subnational governments and emphasize the national level of public management has left a power vacuum at the subnational level in many countries. The present weakness of managerial capacity at this level makes local resource management more difficult.

Additionally, local land ownership and tenure systems may not give incentives for people to safeguard natural resources. Grazing land, forests, and water are often considered common property resources (CPRs), and there are often pressures for individuals to use the CPR for their own advantage in the short run while depleting the resource base over the long run.

During the 1980s this question of the commons received high visibility and extensive examination. Much effort has gone into identifying

effective traditional systems for managing CPRs and understanding how to build systems to meet the needs of today.

Although the jury is still out on how to do it, some lessons are emerging.

- Some traditional societies developed effective rules to govern behavior and regulate resource squandering, and where such societies and rules continue to exist and work, it is desirable to support continued application of their resource management systems.
- Tree tenure or guaranteed access to and use of forest resources through traditional management systems at grassroots social levels can help to provide incentives for sustainable silviculture and nondestructive extraction of forest resources.
- Organizing human effort at the local level can help to restore degraded environments and initiate effective small-scale resource management.
- Both population growth and market penetration can bring destructive pressures to bear on traditional rule making and resource management systems and render them inadequate to contend with the new circumstances.
- Neither privatized ownership nor public regulation, the two major responses to the deterioration of the commons, offers clear-cut solutions to the problem.
- Many of the situations described as common property problems were not - they were rather what remained after common property systems vanished, or they were other regimes.

Thus, the nature of the property may yield less insight for future action than will examinations of bureaucratic behavior, policy conflicts, and the lack of incentives for sustainable resource use.

THE ORGANIZATION OF PUBLIC FORESTRY IN THE TROPICS

Surprisingly little work has been done to map the organization of public sector forestry management in the tropics. Even when heroic attempts are made to collect and synthesize data on the natural resource base, such as the World Resources 1986-91 series, discussion of institutions is limited to lists of international organizations or identification of the countries that have signed a treaty. But listing the treaties to which different countries are signatories is a far cry from mapping the institutional factors that guide local policies and behavior. Treaty commitments can be more rhetorical than substantive when resources are scarce and national political will is divided - implementing the provisions of the treaty requires adequate administrative capacity. Moreover, a signature on a treaty is often more of a downstream effect than an upstream influence on a situation.

Formal institutional configurations do not always mirror exactly the true distribution of power or decision making that dominates in a country or organizations because a combination of historical, structural, and behavioral elements can cause a similar organizations to function differently under different circumstances. Both formal and informal dimensions are discussed below.

FORESTRY MANAGEMENT ORGANIZATIONS

The organization of authority to determine priorities for forestry management is both an outcome and a cause. It is an artifact of political power struggles to determine who gets to control the resource and the various benefits it may produce. Thus, to judge the informal pressures encountered by an agency, it necessary to know the history accompanying its birth. At the same time, a choice to use one organizations as opposed to another is a cause - it partly determines who will get access to the resource base and consequently how it will be used in the future. Moreover, it directly creates barriers and opportunities that program managers will encounter. Thus, attempts to put the

brakes on runaway deforestation should be based on an understanding of the pitfalls and potentials associated with the use of different organizations.

Public sector responsibility for forestry management and protection is commonly entrusted to one of four types of national agencies in Third World countries. They are a parastatal body, a department inside a larger ministry, a separate ministry of forestry or natural resources, or a ministry of natural resources and tourism. Each of these configurations makes a statement about the perception of the forests held by national leaders and about how access to forest resources will be controlled.

One way of organizing the public sector responsibility for forestry is to establish a parastatal body outside the normal machinery of government and give it a free hand in its operations. This has been done in many countries. Although it is not universally true, often the decision to do this reflects the distribution of power in the country. When a small minority (military, racial or tribal) holds an inordinate amount of power, a parastatal body is often preferred as a way of isolating control of forestry resources from popular pressures and letting a small group quietly get away with extracting the wealth. Thus, the artifact reflects the distribution of power and it also partly determines the constraints and opportunities surrounding those who manage the resource.

Numerous countries in Africa and Latin America show this pattern of organizational choice and resource use. Although it cannot be contended that this is an ironclad relationship between an organizations mechanism and forestry management, it is corroborated both by my own personal experience and by discussions with numerous development observers. A general pattern seems to be emerging.

Another common approach to forestry is to subsume it as a department under a ministry of agriculture or mines. In such a setting, agricultural production or mineral extraction gets priority attention and forestry is often a second-class citizen in the battle for financial resources. The agricultural version of this configuration can, however,

promote the integration of forestry concerns and tree crops into the agricultural agenda.

Multiple uses of wood products, greater distribution of the tree cover, access to extension facilities and services, and various other factors distinguish this approach from that of the parastatal body (in the case of agriculture). A totally exploitative approach characterizes the other case.

But again, a static view is not warranted. In many countries there has been a constant shifting of the forestry oversight role from the ministry of agriculture to a separate ministry concerned, often, with forests and fisheries and then back again to agriculture. This history must be understood and placed within the context of the rise and fall of cabinet ministers, population growth, mayor sources of foreign exchange, the geographic distribution of forest wealth in relation to sources of political opposition to the dominant regime, and other historically significant factors in a particular nation.

The third major option for placement of forestry responsibility is in a separate ministry, often called "Natural Resources" or "Forestry and Natural Resources." In some situation this includes minerals and mining, and this can have detrimental effects on the priority given to forestry. In most cases, however, this separate setting strengthens the position of the forestry focus.

Such ministries, however, seldom compare well with agriculture in the competition for funding, facilities, and people. The dominance of forestry professionals within the ministry does have a positive effect on esprit de corps. Foresters are at least not second-class citizens in their own organization. Their own professional norms occupy a more prominent position in the organizations mythology.

This may also lead to conflict with other organizations. For instance, protecting local hardwood forests depletion may require confrontation with foreign exchange - earning extractive industries (such as mining) or wood energy - intensive agricultural activities (such as

tobacco production). Or it may pit foresters against national elites bent on transforming local natural wealth into foreign financial deposits.

This organizational form allows conservation perspectives to attain an equal status with production perspectives. But poor links to village organizations and an underdeveloped extension system often characterize this model. (In one country a local forester called the forestry extension system a "tree without roots.").

The fourth major location for the public sector unit charged with responsibility for forestry management is in a ministry of "Natural Resources and Tourism." This tends to link trees and wealth in a very different way than do the other options.

When countries have unique, special, or abundant fauna that attract global attention, there is often a tourist industry based on that resource. Tourism generates foreign exchange through the preservation of the resource rather than its extraction (although the ivory traffic and the trade in endangered species do represent illicit, short-term extractive behavior). Thus there is at least some pressure toward afforestation, species conservation, and the treatment of indigenous species of flora and fauna as national resources.

This introduces an economic value for forests and wildlands as species habitats, an emphasis less common among the other organizational options. Appreciation for indigenous tree species and an ecological perspective are more respectable in such surroundings than in some of the others described above.

The tourism trade can also be a trap. It tends to be import intensive, it requires a strong world economy to guarantee international visitors, and it is usually an enclave industry benefiting mainly a few urban entrepreneurs. Without institutional mechanisms to share revenues with villagers in areas adjacent to wildlife reserves or development investments to limit the need for encroachment, the link to tourism can be risky. Other concerns such as soil erosion, moisture retention, and forest protection in areas removed from tourist views may be slighted.

Likewise, system-wide procedures and behaviors need to be understood to avoid performance problems. The internal design of forestry management organizations is only one part of the institutional puzzle. The balance of institutional agenda, resources, and linkages is also required.

THE BALANCE OF INSTITUTIONAL FORCES

The operation of the formal forestry management organizations noted above will vary with two sets of factors. One is the overall set of public institutions in relation to the forestry organization. The other set involves cultural patterns and the informal distribution of power and incentives within the nation.

Interagency Dynamics

The balance of resources and agenda among ministries will shape the operation of a forestry management organization. For example, in Thailand, where the forests are so depleted that logging is now illegal, the Ministry of Forests is charged with protection of forests and national parks. At the same time, there is a conflict with a ministry that would seem to be a natural ally - the Ministry of Tourism.

Rather than promoting ecotourism, the Ministry of Tourism sees its mission as championing the construction of roads and artificial lakes to attract the Asian tourist trade and capture foreign currency. This may be an accurate reflection of present demand for leisure opportunities among the wealthy classes of Asia, but it directly pits one ministerial agenda against another. Relative budgetary strength and access to sympathetic and powerful actors, such as the king, will be important determinants of which perspective dominates.

In other countries the interorganizational dimension takes a similar but not identical form. Relative budgets reveal much about true priorities. When a forestry department devotes most of its budget to a production division and that division of one department has a budget that greatly overshadows the total budget of a regulatory department, such

as Papua task of the second organization is made much more difficult. This particular scenario is played out in many tropical countries, as well as in some major nations of the northern hemisphere.

Overlapping jurisdictions among the various ministries charged with forest protection and utilization also can complicate the picture. In some countries mangrove and other coastal forests come under the authority of a different ministry that do upland forests. Or contradictions among the roles of local governments and departments of agriculture, forestry, and public works can delay the identification of authority to stop questionable practices until it is too late and the forest is a thing of the past.

Unclear division of responsibility and authority serves the interests of exploiters in cases where the strongest leadership resides in the organizations sympathetic to the mining of the wood. Where the stronger leader heads an organization aiming at protection and sustainable use, then the protection agenda might temporarily prevail as a result of fuzzy jurisdictions. Protective action can precede sorting out of the legalities, but this is not often the case. Generally, clarification of responsibility will help to save the forests. Nevertheless, each case must be assessed based on local circumstances.

Other system-wide practices such as reimbursement procedures for civil servant expenses or monthly payment systems for all ministries can greatly constrain the activities of forest department but not parastatal bodies. Sometimes important factors come from across national boundaries. For example, Thailand has banned logging but not the transport of logs. So timber from Laos and Burma makes its way through Thailand - deforestation has been exported.

Formal relationship among public and private organizations are not the only complicating factors. Often informal political agreements and social practices change the nature of organizational dynamics.

Informal Dynamics

The formal allocation of power and authority does not always reflect true decision-making practices. For instance, if the military acts

as a shadow government and has veto power over development activity, then the military must be educated and co-opted into helping to save the forests. Ignoring the military could negate the effort in terms of both poorly mobilized efforts and contradictory policies, such as the construction of security roads into virgin forest and protected areas.

Informal behavioral systems also can be important. Well-intended attempts at regulation may produce only unintended opportunities for levying bribes on those to be regulated, or the formal mission attributed to an organization may be at odds with its actual operating style. Attempts to rein in deforestation dynamics will be more likely to succeed if such factors are taken into account.

The culture of an organization may be at odds with its formal mission. Viewing public employment as a chance to eat public resources in one version of this that is found throughout the world. Structural factors can reinforce nonprofessional behavior. For example, the need to move from a technical to a managerial career track once a certain level has been reached can dilute the limited expertise within an organization. Experimentation with uncapped technical promotion paths is being conducted in Asia under the rubric of "functional organizational."

The Bureau of Forest Development (BFD) in the Philippines shows the importance of informal factors. Although its formal mission was to protect the forests and regulate logging, its informal operation was as an assessor of royalties and protector of logging interests. Under Marcos its staff lived in comfort based on the bribes they extracted from illegal loggers. In attempting to clean up this situation, the present administration as recognized the need to dismantle the BFD clique. Senior people have been retired, some junior people have been dismissed, and most of those who remain in the civil service have been transferred to other organizations. In addition, a new department has become the home of the previous BFD functions. Thus, both formal reorganization and informal personnel dispersal are recognized as necessary ingredients for reorienting a bureaucratic entity.

The discussion above suggests that the role of institutional factors in tropical deforestation is complicated and sometimes counterintuitive. Nevertheless, it is real and major. One observer of Third World forestry initiatives stated that "critique after critique within and among countries and bilateral and multilateral donors point to institutional failures as major obstacles to success. So serious are the questions of institutional development that, if donors and country governments are unwilling to confront them realistically, then they face the harsh dilemma of postponing the programs until they are" (Buckman 1987, 121). Clearly, any donor strategy to slow down deforestation must contain a core component emphasizing institutional strengthening, reform, or innovation. To work, the strategy must take cognizance of both formal and informal dimensions of organizational behavior. But some of the strengthening, reform, and innovation may need to occur within the donors themselves.

Donor Dynamics

International public and donor pressure is having an effect. Indonesia, for example, is very sensitive to a perceived world image of it as a country squandering its resources. Continuing low oil prices, however, intensify the search for foreign exchange-earning opportunities, and forest depletion continues apace.

Well-intentioned donor programs can even hasten the depletion process. For example, installing plantations on degraded lands gives an incentive to mine it now, declare it degraded, and then get funding to establish an estate of exotic species. Investment in rehabilitation can thus encourage immediate destruction.

Often the donor message is even more mixed than this. In some countries both bilateral and multilateral aid programs are increasing their forestry focus. But this is not a new infusion of resources - it is merely a reordering of priorities within a previously set program level. (An exception is the Japanese fund that is presently being established, but some observers see this a little more than "guilt money" to compensate for the role of the Japanese private sector in tropical deforestation.)

Sometimes the new donor emphasis is only cosmetic in symbolic ways. Changing a project name to include forestry or natural resources does not necessarily reflect a reordering of priorities and resources. Likewise, ignoring needs such as municipal water systems or urban housing may be passing up an opportunity to lessen some pressure on the forest land, even though these projects contain no mention of forests. Substantive connections among programs, not titles of loans or grants, are key to reducing the rate of tropical deforestation. A coherent and comprehensive strategy is needed. Even the Tropical Forestry Action Plan has been criticized for overemphasizing forest industry and slighting other dimensions.

There are clearly many actors and many levels of involvement where improvements are needed. There is no institutional silver bullet to solve the problem of tropical deforestation, nor is there any single ogre responsible for the problem. Without better institutional mapping and an increased focus on institutional change, natural resource management performance is not likely to improve. Both institutional studies and institutionally oriented technical assistance are needed to strengthen the entire range of institutions involved in sustaining or protecting the planetary tropical forest resource.

STRENGTHENING INSTITUTIONS TO SAVE TROPICAL FORESTS

The foregoing assessment suggests two things. First, both direct and indirect causes of deforestation must be addressed for a long run solution. Second, solutions will require selective strengthening or reorientation of existing institutional configurations and operations, or maybe the invention of new institutions, to work. All three levels - international, national, and local - will be affected.

Dealing with this complex problem will entail embarking upon two different solution paths simultaneously. The first path leads toward limiting demand for wood consumption and forest clearing. This is a long run emphasis on technology development and diffusion and on public

awareness. The second path leads toward protecting the supply. Short - and medium - term sustainable uses of the forest resource and direct protection of the forest from human predation characterize this path. All of these contain institutional aspects, and those aspects are noted below.

LIMITING DEMAND

A basic element of demand is population growth in the consuming countries. Ultimately, this must be checked. In the short run, however, there are three key areas to be addressed. One is the development and diffusion of energy-saving and substitute technologies to limit demand for wood fuel and construction material. Another involves environmental education to shape values that are more conducive to less exploitative uses of forest resources. The third is direct suppression of trade in forest products.

Technology Development and Diffusion

Technologies are needed to increase the efficiency of wood use, provide substitutes for wood products, improve harvesting methods to alleviate the destruction of forests when timber is extracted, promote agroforestry, allow the production of indigenous species, and manage human population levels. Indeed, the list could go on. The point, however, is that institutions are needed to conduct research, develop prototype equipment and practices, test them, and diffuse them to users. Most of the institutions presently existing in the Third World have limited capacities do to this.

One part of an agenda for institutional strengthening would be an emphasis on technology development organizations. Better staff, equipment, supplies, and facilities are needed, but reorientation of effort and focus may also be necessary. Knowing and respecting village viewpoints may spell the difference between success and failure. Technology development may be done well in a public sector setting, but manufacturing and marketing may be better left to the private sector. Development, however, would need linkages with producers and

marketers to understand their constraints and allow adjustment of technical designs.

This suggests that not just a few organizations but rather technology development institutional networks are needed. To work, technology development and diffusion requires multiple actors and organizations. Subsidies of research and development work and policies to encourage the development and use for new technologies may also be needed.

Education and Values

Conservation education is considered to be an integral part of any conservation program. Appreciation and respect for nature is depicted as a sine qua non for generating public support for conservation programs and instilling and appropriate behavioral ethic in a population. For the longterm perspective this is undoubtedly correct.

But let us not be naive. Unless individuals, communities, and organizations are provided beneficial alternatives to forest-destroying practices, the destruction will continue because their livelihoods depend upon it. People do not destroy natural resources just because they want to, but rather because they see themselves as having to. Without opportunities to earn a living in nonharmful or restorative ways, people will continue to damage forests even if they are aware of the dangers in doing so. Mass campaigns of education and rhetoric will have little effect unless there are opportunities and rewards for different behaviors.

For those whose earnings are not directly dependent on forest exploitation, however, education may be a wedge into bureaucratic inertia. Information sessions with policy makers may help to persuade them of the need for new policy and program efforts. They may be able to help restructure the national reward system to encourage positive action. Knowledge of the concepts of natural resource accounting, visible evidence of watershed deterioration, firsthand exposure to the effects of landslides from deforested slopes, and pressure from donors can all be brought to bear on policy developers.

One element of education and values is family planning. Not only must limitation of human population growth be vigorously pursued, but also the lessons learned over the last twenty years in social marketing and diffusion of family planning practices and technologies should be adapted for tropical forest protection. Successful family planning programs, such as Indonesia's, may be a gold mine of strategic and tactical information.

Market Suppression

Another approach to limiting demand for forest destruction is to suppress the market forces. Recent experience with the ivory trade provides an encouraging example of an effort to do this, although experience with limiting the harvesting of whales offers a discouraging one. Helping nongovernmental organizations (NGOs), supporting policies that bar market access, and policing international trade in forest products can be elements of market suppression.

Convincing international financial institutions to withhold credit or insurance coverage for ventures that threaten the forests would be another aspect of market suppression. Anything that increases, directly or indirectly, the costs of destructive behavior should be explored.

PROTECTING SUPPLY

Two thrusts will be needed to protect the dwindling supply of tropical forest cover. The first emphasizes sustainable utilization. The second emphasizes direct protection and nonutilization of the forest products.

Social Forestry and Sustainable Use

There is increasing evidence from the Amazon to Australia that, over the long run, tropical forests yield high financial returns when they are farmed for their nonwood products instead of mined for their timber. Likewise, selective and careful extraction of forest wood that maintains the integrity of the forest ecosystem can yield greater long-

term profits than monoculture plantation production that destroys the ecosystem. But this is the long term. The problem is that wood mining generates fast profits.

A key to solving this problem is getting control of the forest resource into the hands of those who have a vested interest in maintaining a sustainable yield system and out of the reach of those whose interests are in the immediate exploitation of the resource. This is no easy task. It will require strong policy shifts, organizations capable of enforcing the policies and protecting them against political and economic market pressures, and the development of grassroots institutions to manage the forest resource.

An approach increasingly popular among international donors is to build grassroots organizations to manage sustainable forest enterprises, grow trees for household fuel and construction needs, conduct research on exotic and indigenous species, and examine policy prerequisites for sustainable forestry management. When these elements are placed under a single program umbrella, the result is often called social forestry. Such programs are increasingly confronting performance problems of an organizational nature.

Social forestry is not simply the growing of trees by forestry technicians. Quite the opposite - social comes before forestry. That is, the effects on the trees and other natural resources are achieved only through the actions for nonforesters. Conserving woodlands, sustainably harvesting forest products, planting and nurturing woodlots, and improving the efficiency of wood-consuming activities all result from the actions of people outside forestry agencies - villagers, entrepreneurs, policy makers, local leaders, court officers, and researchers are among the key actors. Indeed, a social forestry program achieves its objectives by working with and through various individuals, social groups, and formal organizations rather than by controlling the performance of foresters.

At the same time, the training of foresters emphasizes technical skills and plantation management methods - not extension, negotia-

tion, or leadership. Moreover, forestry department are seldom structured to emphasize operations that link them to external organizations. But with social forestry this is key.

The social part of social forestry involves working closely with villagers as well as other organizations. Rural knowledge, attitudes, and practices may be central to success. For instance, in one country farmers resisted planting gmelina when they saw that it resulted in a "dead forest" without birds or other wildlife. In another country, perspectives on tree production were gender related, with women viewing trees in terms of firewood potential and men seeing them as prospective poles for houses and fences.

Institutional strengthening in the area of social forestry will require the development of new research capabilities and resources, it will contain analytical and legislative activities concerning land and tree tenure systems, it will involve the development of incentive systems that promote a performance-oriented organizational culture as opposed to an extractive culture among key institutions, it will entail training foresters and protected area staff in new skills and approaches, and it will include reorganizing implementing agencies and providing technical assistance to help them to leverage the resources of other organizations. Creating linkages between training institute, local communities, and policy makers will also be part of this.

There have been recent innovations in methods for creating these linkages. For example, action planning workshop approaches using stakeholder analyses and coordination/negotiation exercises with real workgroups have registered success in numerous countries. Such methods will be integral to activities focusing on social forestry and sustainable yield management of forest resources.

Protected Areas and Buffer Zones

Although advances are being made in the area of reclamation science, the cost of protecting an existing forest is much less than the cost of reconstructing a destroyed one. Thus, for the immediate future,

approaches that maintain selected existing forest ecosystems are likely to be far more cost effective than those employing reconstructive tactics.

The immediacy and magnitude of the threat to tropical forests dictate that one component of a plan for minimizing that threat must be direct protection - the establishment of parks and reserves that constrain, and sometimes prohibit altogether, extractive activity. This also has institutional dimensions.

Some of the capacity-building requirements are straightforward and obvious - action-oriented training, increased staffing, and the provision of equipment and supplies to organizations entrusted with the management of protected areas are among them. Likewise, strengthening the training and outreach roles of the institutes educating foresters, park guards, and natural resource managers is equally straightforward.

When debt-for-nature swaps are negotiated, the design and development of the organizations overseeing and implementing the reserves will also be important - organizational "trees without roots" can turn short-term solutions into long-term disasters. Enforcing compliance with the terms of the debt swap will require strong institutions able to marshal allies and support from multiple segments and levels of society and able to keep that alliance over the long run.

When a local NGO is given a monopoly over the management of a protected area, care must be taken to match the scale of the management task to the scale of the local organization. The NGO will also need a secure funding source for the future and allies with aggregate power exceeding that of likely coalitions of predator organizations. Otherwise, defeat will only have been delayed, not diverted.

Other capacity-building efforts, however, are directed at organizations without a direct management role and are less obvious. For example, the strengthening of court systems and prison facilities may be needed along with new laws reflecting the newfound appreciation for preservation of species and habitats. Similarly, policy analysis capability to consider such things as the demographic influence of job cre-

ation in urban settings away from protected areas, the effect of road-building in adjacent provinces, land tax preferences for developing new land, and the effect of price policies on tourism may be less obvious but equally important. And the organizations with power may be outside the normal constellation of development and conservation institutions. In some countries the military is a crucial actor and the operational definition of national security may exclude forest preservation.

Much of the institutional focus will be on buffer zone and transition zone management. This is an area that is both new and lacking in knowledge and, at the same time, old and commanding a wealth of knowledge. The new part involves walking a tightrope - ensuring adequate economic opportunity in the area surrounding the reserve to alleviate the need for people to encroach on the reserve to obtain a livelihood, while simultaneously not creating a growth pole or magnet that draws people into the area. How to do this is not presently known. The old part involves much of the accepted wisdom on rural development management. The lessons learned over the past two decades about participation, decentralization, local revenue administration, integrated rural development and administrative control, local organizations, land tenure, gender considerations, small-scale enterprise, social learning, and the processes of rural development management all hold some of the keys to effective transition zone management. It is not necessary to reinvent the wheel.

Indeed, some of the existing knowledge may be found in places far afield from protected areas. Improving the capabilities of higher and higher density urban areas to keep people away from the remote zones may be crucial for protecting those zones. Rural protection may be a direct function of success in urban development. This may be especially true in those cases where the transition from urban area to buffer zone is a quick one.

Linked to protected area management is the tourism trade as a revenue generator. From East Africa to the Galapagos, ecotourism has helped to protect and give economic value to critical ecosystems, but

most tourism has down sides as well. First, it must be managed so as not to destroy the value of the area. A stream of tourists can cause as much erosion as a stream of water. Second, international tourism is fickle, requiring a strong world economy to generate traffic. Third, tourism is not only a source of foreign exchange, it also consumes large amounts of foreign exchange itself. And fourth, tourism is an enclave industry with a high percentage of its proceeds going to an urban elite. Experimentation with revenue sharing with localities on the fringe of the protected area is occurring in some countries (such as Zimbabwe), but much more needs to be done to ameliorate the negative effects of the tourist trade. Building local, or regional, tourism is a partial answer, but it is usually inadequate and it produces less foreign exchange.

Creating incentives for nondestructive behavior and mobilizing popular support for sustainable development are keys to success. Policy reform related to these thrusts is also important, and strengthening policy analysis capabilities is concomitant with all three emphases. Natural resource economists and conservation biologists certainly need access to national policy makers. But implementation capacity must follow policy reform. Otherwise, rhetoric reigns and the forests continue to disappear.

CONCLUSION: THE INSTITUTIONAL IMPERATIVE

Putting the brakes on tropical deforestation requires three institutional initiatives - mapping, strengthening, and inventing. These are discussed as they relate to the issue of sustainable forestry in North America.

INSTITUTIONAL MAPPING

Three types of institutional studies are needed. First, comparative data need to be developed to allow assessments of relative institutional strengths and weaknesses among sectors and countries. For instance, the percentage of the public budget or public could show comparative

commitments to environmental improvement, but other, complementary data might be needed to interpret this fully.

For example, the percentage of a resource management agency's budget committed to personnel costs, or the wage bill, would give an idea about absorptive capacity and ability to respond creatively to new challenges. In the United States, state governments typically spend about 70% of their recurrent budgets on staff cost. In the Third World, however, the corresponding number is closer to 95%. This has clear implications.

Among sectors, some ratios might also be useful. For example, the ratio of foresters to agricultural extension agents or teachers or soldiers might reveal relative priorities in the past, imbalances with future needs, and possible human and organizational resources to be tapped in the effort to halt deforestation.

Comparisons of the openness of information flows in different countries could also be useful. Control of the press and the accompanying secrecy of exploitation make a difference in the ability of donors, NGOs, and political opponents to mount a campaign against resource degradation practices.

Comparative data on tax policies that influence resource use would also be helpful. The presence or absence of key policies and incentives and the relative strength of important government agencies and NGOs need to be mapped far better than they have been to date. Simple descriptions and identifications are needed before more sophisticated analyses can be done.

The second type of study that should be conducted is a case study. Identifying how the institutional configuration evolved and what informal mechanisms affect performance can better be done through case studies by institutional specialists with a grounding in the natural resource management field.

Care must also be exercised here. A core set of common data points covering key institutional relationships and human behaviors must be

part of the case study exercise. Although it remains largely uncodified, there is already enough field experience among institutional specialists to suggest what that core data set should include.

The applied purpose of the exercise should also be kept in the forefront. Extracting possible lessons for replication elsewhere and aggregating cases to discover influence patterns would both complement comparative data development and further the art of technical assistance to natural resource management institutions.

The third type of institutional study involves examining traditional resource management systems used by indigenous people throughout the planet. Understanding the connections among natural resource bases, social values, political institutions, and sustainable agriculture can be invaluable. Tapping a "cultural gene pool" may uncover new strategies for sustained-yield and multiple-use forestry management.

Key mapping thrusts should be

- comparing the openness of information and relating it to the success of NGOs, the performance of natural resource agencies, the effectiveness of regulation, and so forth, and
- developing a comparative worldwide data base of forestry resource management institutions using indicators such as budgets, staff, percentage of budget devoted to wage bill, jurisdictional overlaps with other agencies, national policies, performance incentives, analytical units, and so forth.

INSTITUTIONAL STRENGTHENING

Some of the case studies could be conducted as part of technical assistance exercises or donor sector assessments. When combined with action planning efforts, these studies could directly help natural resource management agencies to perform better.

For example, a public sector management review could focus on the natural resource management subsector. Institutional barriers to fol-

lowing soft energy paths and reclaiming degraded environments could be integral to such an effort, and an understanding of institutional constraints, opportunities, and linkages at the national, intermediate, and community levels could help to promote more informed and effective assistance in natural resource management.

Integrating institutional specialists into technical teams and providing greater management assistance to resource management programs could also combine performance improvement with knowledge generation. Techniques are available to help resource technicians deal with institutional problems transcending their own organizations and sectors. Such help should be increases dramatically. But this is not enough. A coherent, concerted effort to develop a data base on natural resource management institutions is long overdue. Forestry could become the pilot sector for developing such a data base.

Key thrusts in operational assistance should be

- changing the relative resource strength of natural training, protection, and monitoring agencies in relation to exploitation agencies;
- strengthening with reorganizing the balance of public sector resource management agencies and clarifying jurisdictions of those agencies;
- generating opportunities for villagers to obtain livelihoods in nondestructive ways;
- reviewing land tenure systems and arrangements and their effects on deforestation and promoting forest-conserving land use and land distribution;
- developing natural resource policy analysis units in ministries of finance; and
- building capacities within protection agencies, subnational government and community organizations, and NGOs to manage their resources and influence other actors.

INSTITUTIONAL INVENTION

The discussion above emphasized the importance and nature of institutional elements in the use and misuse of tropical forests. A constant theme has been the need to understand more fully the roles played by institutions to date and to incorporate this knowledge into any strategies developed to combat deforestation. Indeed, it is argued that institutions must play key roles in such strategies.

But let us not narrow our vision by considering the institutional arrangements of the past as the full array of options for the future. We do not need just to do better what we have done - we also need to do new things. And we need new institutional arrangements to do new things.

Numerous institutional inventions have affected human history - the nation-state, the bureaucracy, the private corporation, the political party, the election of leaders, the research university, the bank, the agricultural extension system, and the cooperative society, among others. They emerged as responses to the need for new ways of ordering human relationships to achieve objectives or execute specific tasks. At one point they were innovations. Once they became familiar aspects of the social landscape, it became hard to imagine a world without them or to see alternatives to them.

In times of crisis imagination is called for, and this may be such a time. The present array of institutions seems hard pressed to respond to the planetary environmental degradation we are witnessing. We use organizational mechanisms not because they are necessarily what we need but because they are there. We choose when we should invent.

The present emphasis on NGOs may be a case in point. The search for alternatives to bureaucratic stasis once pointed to parastatal bodies as a potential alternative. Now they are in disrepute, and the NGO has risen as the new hope.

Innovations such as the debt swap are needed. Public trusts, legal standing for trees, and various other basis changes are promoted by

different actors. Some may prove to have staying power, whereas others may be little more than short-lived experiments. But such experiments are necessary if we are to meet the needs of the end of the twentieth century.

The needs that we have identified include the inhibition of human reproduction, the empowerment of local communities, the provision of sound scientific knowledge to local organizations, the buffering of poor people from the pressures of international marketeers, the generation of economies based on sustainable processes and principles, the equitable redistribution of access to land, and the redefinition of security to include a supply well into the future of the benefits generated naturally from the tropical forests. Both public bureaucracies and NGOs certainly have a role to play in meeting these needs, but we may have to cast away blinders that limit our views - blinders like the public/private dichotomy, national sovereignty, the mutually exclusive definitions of conservation and development, or the segregation of the natural and social sciences.

Additionally, we need to go beyond the currently popular views of the evils of subsidies or regulation. Indeed, a regulatory rebirth based on the offering of carrots instead of the brandishing of sticks may be necessary. Just as coproduction of services by users and providers has helped to redefine organizational roles in many areas, so too the sharing of regulatory, protective, and distributive functions may be the key to sustainable natural resource management in the twenty-first century.

This synopsis of experience from the tropics suggests seven areas of concern for the promotion of sustainable forestry in North America.

1. **Population policy:** Unless population growth is checked, the pressures for overexploitation will increase to the point where they are uncontrollable.
2. **Open information flow:** Media and public knowledge of what is happening is essential to keep actions on the right track.

3. Tax codes and public policies: Human behavior and land use are often determined by incentives created by factors not directly focusing on natural resources, and these must be made compatible with sustainable resource use requirements.
4. Private policies: Employment practices of private companies can lead to stress on the natural resource base. Lack of fringe benefits for part-time employees or unacceptance of telecommuting, for example, can reinforce resource squandering. Private practices should be examined for their resource implications.
5. Reorientation of private organizations: Some organizations that earn their profits exploiting the resource may be able to be transformed into organizations that keep some of their skills and attributes but apply them to nonexploitative activities, and assistance should be given to explore such transformation possibilities.
6. Reorientation of public organizations: Public natural resource management agencies often take narrow technical perspectives toward their missions. They need to become broader in terms of embracing new skills and coproducing services with a wide range of other actors, and they need assistance in making the transition.
7. Creation of ecomarkets through public investment: Using public funds and policies to encourage research and development, goods and service production and delivery, and land use that support a sustainable society is an essential element in institutional reorientation.

These seven institutional recommendations confront both barriers and possibilities. They go beyond the knowledge hypothesis and support new behavior. The challenge is to transform them into institutionalized actions.

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POST DROUGHT ADJUSTMENTS AMONG HORN OF AFRICA PASTORALISTS: POLICY AND INSTITUTION BUILDING DIMENSION

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INTRODUCTION

Pastoral semi-nomadic communities are among the world's least understood peoples. Romanticization of their wanderings, military prowess, and simple dignity has obscured the true dimensions of their lifestyles, precarious existence, and marginalization. In the massive literature on rural development, the contribution and requirements of pastoralists continue to be largely overlooked and under-emphasized. In the world-wide concern for people afflicted by drought and famine with increasing frequency, the fact is often missed that pastoralists are among the most immediately and directly affected.

This paper examines the macro-policy environment that has emerged out of efforts to combat the human, economic, and political consequences of drought and famine for pastoral peoples in the Horn of Africa. It attempts to summarize research on governmental policies toward pastoralists and their impact on them, particularly the estimated five to six million living in Djibouti, Ethiopia, Somalia and Sudan.

2. THE ENVIRONMENTAL CONTEXT OF PASTORALISM

Pastoralists' numbers have declined steadily in recent years as a result not only of drought and famine but of secular processes of economic and social change that have penetrated, undermined, and transformed their communities. However, in regions such as the Horn of Africa, they continue to constitute significant, albeit sharply varying, percent ages of national populations. They represent perhaps as much as 65% of the rural populations of Djibouti and Somalia and as much a 12 and 6% , respectively, of the rural inhabitants of Sudan and Ethiopia.

Moreover, pastoralists' contributions to national economies are far greater than is frequently recognized, notwithstanding their number and official ignorance of their socio-economic systems. Somalia is a extreme case in which the livestock economy may contribute as much as 80% of the country's foreign exchange earnings and 50% of tax revenue. Frequently, though not always, pastoralists wring contributions to national economies out of drylands that largely lack other forms of economic potential. An exception is the Awash Valley in Ethiopia where pastoralism competes to varying degrees with irrigated agroindustry, tourism based on the presence of wildlife, potential geothermal energy development, and archaeological exploration. Pastoralism generates significant employment and may exhibit high labour productivity. Not insignificant are the contributions pastoralism potentially may make to stabilizing environmentally fragile and sensitive lands.

Who is a pastoralist? Governmental policies often fail to take account of the variability of pastoral lifestyles and economies and of the thin line that may separate pastoral and sedentary rural societies. Mobile livestock herding alone is not sufficient to define pastoralism, for many pastoralists are also partially sedentary or live symbiotically with relatives engaged in agriculture. Moreover, patterns of livestock raising mobility vary and change substantially over time. Some peoples are transhumant, while others, though and the extent of pastoralism have been governed by climatic factors and changes in the

quality of grazing lands as well as by encroachment by other peoples and by agriculturalists.

Recognizing these elements of variability, Livingstone defines pastoralism as a low cost, labour intensive means of animal production based upon natural forage ². Swift, too, recognizes that many rural peoples engage partially and/or intermittently in pastoral pursuits. He, therefore, defines pastoralists as those for whom 50% or more of household revenue derives from livestock related products³. Accordingly, agro-pastoralists are those who earn between 10 and 50% of their household income from livestock products.

There appears to be an emerging if embryonic consensus that pastoralism is a shrinking rather than expanding economic enterprise in many parts of the world, including the Horn of Africa. Somalia, again, dramatically illustrates the point. Estimates are that pastoralism has shrunk in barely more than one generation from providing employment for 90% of the workforce to perhaps 65% presently ⁴. The causes, extent, and merits of a diminishing pastoralist sector are complex and much debated. One point of controversy is the degree to which the environmental degradation of pastoral lands has contributed to the declining numbers of pastoralists. In opposition to the hypothesis of secular, progressive degradation of pastoralists' domains is the view that pastoral lands also recover in good years so that change in land quality are cyclical rather than linear ⁵.

There is no disagreement, however, that declining numbers of pastoralists reflect the shrinking dimensions of their patrimonies, particularly at the hands of encroaching agriculture. In some situations, as in the Awash Valley of Ethiopia, irrigated agro-industry has preempted the best riverine grazing lands, displacing significant numbers of pastoralists and upsetting the ecological viability of their economies ⁶. Pastoralists have also been both pushed and pulled toward sedentarization. They have been pushed by serious and repeated episodes of drought and famine in the belief that agriculture is better insulated from such afflictions. They have been pulled by such attractions of agriculture as perceived higher income earning

opportunities, better access to production supports and essential social services, and opportunities for mobility in socio-economic as distinct from geographical terms. Spreading transport and communications networks have reduced the isolation, and the insulation, of pastoral communities from both “push” and “pull” factors toward sedentarization.

Finally, as pastoralists have become increasingly drawn into socio-economic life of the nation-states which history has thrust upon them, they have become increasingly marginalized. Their economic requirements and capabilities still receive only scant attention in many countries. The needs of their communities for at least some protection from such forces, for assistance in economic development, and for adaptation to new life styles and socio-economic roles are all but ignored, sometimes by donor agencies as well as by host governments. Weak to non-existent political representation and influence are important causes and consequences of this state of affairs.

3. GENERAL ORIENTATION OF GOVERNMENTS TOWARDS PASTORALISTS

In general governments have not understood pastoralism. Inappropriate conceptions of pastoral societies have reigned in official circles, and unfortunate policies toward them have resulted. In the case of the Horn of Africa, it might well be an exaggeration to characterize contemporary governments as indifferent to the plight of pastoralists. Ethiopia and Sudan for example, have both taken some legislative steps to address perceived requirements of small producers, including pastoralists. However, it is not apparent that working policies affecting pastoralists have been markedly more effective than those of other governments. One reason is the prevalence of misconceptions concerning pastoral economies and societies.

First, because pastoralists hold land and sometimes other natural resources in common, they are often assumed to fall victim to Hardin’s paradox of the “tragedy of the commons.” A variation of the prisoner’s dilemma paradigm, the hypothesis is that pastoralists have

every incentive to increase the size of their individual herds and none to cooperate with others in restricting the total usage of grazing areas to prevent degradation. But the classic prisoner's dilemma paradigm rests upon several very restrictive assumptions. Carlisle Runge, for example, has argued on experimental grounds that the interpersonal distrust basic to the paradigm disappears with multiple iterations of the game; i.e. individuals can and do learn to trust and cooperate with one another⁷. It follows that institutions may exist or may evolve to institutionalize the fact and expectation of such cooperation. It also does not necessarily follow that individualization of pastoral land tenure systems would, *ceteris paribus*, cause herders to be any more cooperative than under more collective tenure systems and, in fact, might inhibit such cooperation. Finally, other things are not equal, for pastoral communities have become increasingly stratified, affected by government policies, and influence by land pressures as a result of encroachment by agriculturalists.

Second, pastoralists are widely assumed not to respond to market incentives as they are supposed to. This judgement in turn is based on criticism of their alleged excessive accumulations of stock which may seem to suggest that pastoralists are not properly animated by profit motivations. Pastoralists are then assumed to be ineffective managers of their environment because they permit excess accumulation of animals to degrade their rangelands.

In fact, governmental planners "evaluation of herders" behaviour by this standard betrays many-faceted misunderstanding of pastoral economies. Governments often do not appreciate the scale of risks herders experience; i.e. the need to build herds as a hedge against future droughts. They may impose too conservative a standard for carrying capacity, i.e. herd sizes sustainable in drought years, at the expense of returns to be realized from building larger herds in good years⁸. Planners may underestimate the value of herds in providing employment or, as Livingstone puts it, the importance of considering stock-people as well as stock-land ratios. Indeed herd management for profit maximization and for employment generation may be antithetical to one another. In this way the subsistence requirements of

pastoralists may be underestimated, leading planners to suppose, falsely, that pastoralists unlike small scale agriculturalists do not market their product when and if subsistence needs are first met.

Official analyses may fail to allow for the low opportunity costs apparent to pastoralist of stock accumulation in good seasons. Underlying such misjudgements may be a lack of awareness of market imperfections and poor market access. Opportunity costs that might be present are not properly communicated. Moreover, official analyses are often based on the assumption that livestock are held for sale as meat, where pastoralists may value them more for their milk. In this case market access can be an even greater problem. Where pastoralists do focus on beef production, evidence provided by the Fulani and others indicates that pastoralists exhibit no reticence about market participation.

An important manifestation of the marginalization of pastoralists in contemporary national economies is the absence of research on the economics of pastoralism. Little is known about how pastoralists respond to price signals and why. There has been relatively little research on how they balance capital accumulation, risk coverage, drought anticipation, social cohesion (e.g. bride price), profit maximization and employment generation in managing their hers. Moreover, such analysis should factor in the environmental circumstances with which pastoralists must cope.

Third, governments may misunderstand the nature, rationale, and extent of pastoralists' mobility. Pastoralists' movement is not simply the manifestation of a romantic lifestyle, as observers may characterize it, but a carefully calculated drought avoidance, environmental maintenance strategy. Moreover, there is often a predictable and sometimes very circumscribed pattern to pastoralists' movements, making them less inaccessible to those geared to sedentary economic activity.

An important consequence of the official misperception of pastoralists' economic behavior is that they are marginalized because governments assume they stand outside the market economy. Thus

governments underestimate pastoralists' needs for protection from environmental adversity and encroachment, for assistance in improving the value of their herds, and for the transition of those who changed from pastoralism to a more conventional sedentary economic activity. Moreover, from my own research in Ethiopia, it has become clear that because governments underestimate the rationality of pastoralists as economic actors, they discount even the capacity of pastoralists to function effectively in settings even when there is research evidence to the contrary (4).

4. THE IMPACT OF GOVERNMENTAL POLICIES

A. In general

A consequence of pastoralists' marginalization is that governments fail to monitor and respond to the threatening changes in their circumstances and neglect to engage pastoralists themselves in shaping programmes for their own advancement. Pastoral programmes and projects are, therefore, more likely to fail. Thus, a vicious cycle emerges as officials' pessimism deepens regarding the possibility of promoting development in pastoral communities which become further marginalized due to greater official disregard. Such factors as the stratification within and between rural communities, the proletarianization of herders as tenders of others' livestock, and inappropriate institutional frameworks may escape detection in technically focused official projects. This in turn results in part from knowledge that, when tapped through more participatory development processes, may help official initiatives to be more successful.

Swift, draws a distinction between what he terms primary objectives of pastoral development policy and intermediary, or more technical, objectives such as improved range management or better animal health (2). He argues persuasively that policies towards pastoralists should begin with general, macro-level policies for pastoral societies and, only later, move toward more micro-level or technical pol-

icy objectives. These primary objectives he contends include 1) improving the self-reliance of pastoral economies through improved food security, better income distribution and better food production, 2) improving pastoralist' capacity to manage their own local economies through improved education and health care, and 3) an improved articulation between pastoral economies and national economies as a whole by reducing disparities in economic opportunity, increasing the efficiency of livestock markets, and stimulating increased livestock export earnings.

Implicit in this strategy is the premise that policy formation should start from the baseline of pastoral societies as they presently exist. This strategy is similar to that applied by governments for small scale agriculturalists and would enable analysts to spot and deal with critical determinants and constraints in pastoral economies. For example, labor availability or employment generation which are key factors in herd or flock maintenance. Greater attention needs to be given to the role of milk as opposed to beef production. Research should focus on the circumstances, rationale, and consequences of pastoralists' marginal adjustments in the composition of their herds (cattle, camels, sheep, and goats). Improved delivery of credit, marketing, and other production support services is required. More analysis is needed of the water requirements of pastoralists and of the most appropriate ways of meeting them. More analysis is needed of the water requirements of pastoralists and of the most appropriate ways of meeting them. The incidence of taxation patterns on pastoralists requires more examination. More attention needs to be devoted to cultivating and strengthening pastoralists' own social institutions as regulatory and support-providing instruments. This should also help to clarify and codify the nature of existing customs with regard to land tenure and common property. Finally, more energy and imagination must be devoted to helping pastoralists to destock in a rapid, orderly and constructive way during the onset of drought conditions and also to herd regeneration when droughts abate ⁹.

B. Specific Policy Objectives

(i) Equity and access

Among the most central concerns of public policy toward pastoralists is equitable access to the productive use of critically important resources: water and land. Even well intentioned official policies governing control and use of these resources can be and have been counterproductive when premised on inaccurate understanding of pastoral economies ¹⁰.

- (a) **Water:** Pastoralists characteristically inhabit drylands where the ecological balances and margins of human survival are delicate and often precarious. These balances may be, and frequently have been upset by encroaching agricultural populations, increased concentrations of pastoralists and their improvement in their standards of living. However, if not carefully and realistically planned, such increased access to water resources can be counterproductive: increasing the attractiveness of pastoralists' homelands to agriculturalists, stimulating Malthusian increases in human and animal populations that wipe out the benefits, and redistributing animal populations in ways that degrade newly watered rangelands. Studies have suggested that water investments, along with better veterinary medicine, have been the only interventions to increase rangeland productivity (8, 9).

What determines whether improved access of pastoralists to water is productive or counterproductive? The evidence suggests that the critical determinants are 1) the understanding of, and the adaptation to pastoralists' own strategies for maintaining ecological equilibria, and 2) integrating water investments with other strategies for improving pastoralists' standards of living.

Thus, one key to the success of investments in pastoralists access to water is to understand the geographical, political, and economic distributive effects of such interventions. The evidence suggests that one key to avoiding rangeland degradation is to establish numerous,

small water points rather than larger ones in fewer locations. Similarly, water points that open up new, previously non-viable rangelands, may reduce the pressure on existing ones. Moreover, as Botswana discovered water points should be located taking into consideration that many pastoral societies' movements are fairly regular and predictable. The underlying premise is that such patterns reflect pastoralist' understandings of their ecology and that water investments should build upon those understandings. Moreover, to the extent new water points are located to reflect existing movement patterns, their balanced use becomes more likely.

Governmental interventions to improve pastoralists' access to water may be destabilizing through their effects on internal balances of political power in their diminishes the power of the traditional pastoral social institutions that regulate water access. This should be avoided since such traditional controls may be founded on a knowledge of the local ecology that will consequently be lost to everyone's disadvantage. Moreover, it has become empirically axiomatic that empowering of local communities underlines their importance in development efforts and increases the likelihood that they will sustain them instead of passively relying on governments to do so. Finally, the installation of new water points increases the power of those who control access to the preferred grazing areas that surround them. Sensitivity to the political consequences of water point distribution will increase the likelihood that political as well as ecological equilibria will be maintained.

Investments in water resources for pastoralists may have important and potentially counter-productive effects on the distribution of economic power within pastoral communities. In their concern to secure expeditious recovery of their investments in water, governments may allow themselves to favour those pastoralists most able to pay user fees. By doing so they could increase socio-economic stratification within pastoral communities and favor the marginalization of the less fortunate within the communities. Botswana's experience in once again an example. Moreover, the reduction of water access as a bottleneck in pastoral economies may create an even greater bottleneck

concerning labour to the extent that tending and watering of herds and flocks is a labour intensive enterprise. An internal stratification may be the result as those with greater access to labour or the ability to purchase it will profit at the expense of those less fortunate. In the extreme case, a pastoral proletariat can emerge composed of those unable to maintain their own herds and flocks any longer and therefore tend the herds of others as wage labourers¹².

The integration of water investments with other aspects of development policies for pastoralists is necessary to increase the probabilities that unavoidable socio-economic and environmental changes intensified by water investments will lead to positive and constructive results. If water investments should enhance existing rangelands, more research on pastoral economies will increase the knowledge of pastoralists' behavior i.e. when and under what circumstances pastoralists tend to increase their herd sizes and for what purposes. The results of the research work will provide information on how pastoralists do and ought to cover climatic risks, but also on the functions of animals in maintaining the integrity of their communities, i.e. through bride price and other social investments. Policies to deal with such anticipated risks need to be integrated with those for rebuilding pastoral economies after droughts. For the quality and pace of the programmes for rehabilitation influence the dimensions of the climatic risks that pastoralists must anticipate in their economic calculations.

Anticipated excessive increases in human and animal populations as a result of water investment will have Malthusian consequences only if this process will not be accompanied by programmes to facilitate the livestock offtake rates and the reinvestment of the profits in the pastoral communities. Moreover policies need to address actual and potential synergies and interdependences between pastoralists and neighboring agriculturalists. Finally, gradual secular reduction in the number of pastoralists or siphoning off of increase in their numbers to other sectors of the economy, e.g. through sedentarization, may perhaps be inevitable. Rural Development policies need to facil-

itate the productive transition of pastoralists to other economic pursuits and socio-cultural lifestyles. The quality of such programmes will shape the parameters of what can and must be done to improve the standards of living of those who remain in pastoralism.

- (b) Land tenure. Relatively little research has been done on the nature and functioning of traditional pastoral land holding systems. Consequently little is known about the operation of these systems as both determine the outcome of governmental interventions in pastoral economies.

The possible misapplication of the “tragedy of the commons” thesis has already been explored. Less is known of the political and socio-economic impact of external market pressures on pastoral systems than on sedentary land tenure systems. There is also little information about the differences between traditional moves concerning landholding and use and those having to do with other resources that are held in common, i.e. trees and watering points.

Governments have tended to treat as “government” lands those not assigned to sedentary agricultural populations; i.e. they have nationalized lands held in some sense collectively by pastoral communities. Such nationalization shows the ignorance and/or indifference to pastoralists’ claims to such lands. The Ethiopian experience illustrates some of the adverse consequences. The nationalization of such lands and their natural resources has engendered harmful economic and political insecurities in pastoral populations in the Awash Valley and has created justifiable apprehensions brought on by government-sponsored intrusions of irrigation-based agricultural estates on the best riverine grazing lands of the Afar. Prior to 1974 such intrusions increased the stratification within the Afar community by prompting the former Sultan to acquire estates of his own in order to control such encroachments, albeit at some cost to his “domestic” political legitimacy. Since 1975 land reforms that ostensibly took distinctive pastoral landholding systems into account have in fact not done so. With multilateral participation, encroachments on Afar lands have increased and the Afar have been obliged to accept villa-

gization and sedentary settlement or to be further marginalized. The official failure to understand and respect the existence of pastoral landholding systems has caused governments in effect to deny pastoralist' traditional claims to their own domains (4).

These are may dimensions to the necessary, genuine reform of pastoral landholding systems. Existing systems must be understood and respected in the first place as the starting point for reform not arrogantly preempted. Local control and management of land tenure is as essential for pastoralists as it has been recognized to be for agriculturists. The differing existing rights and claims of pastoralists must be documented as, for example, the rights of the Kikuyo smallholders which were documented under the Swynnerton plan in the 1950s in Kenya. The needs of pastoralists for security of tenure, e.g. particularly women and the poor, must be provided for while allowing enough flexibility to movements within pastoral communities and the temporary and permanent entry and exit of people from the pastoral sector. Reforms must extend to the nature and functioning of informal markets in land - or formerly common property resources within pastoral communities. It is important that there be locally legitimate procedures for adjudicating rival claims and for maintaining land tenure rules. Government agencies must be collaborative and consultative rather than highhanded and dictatorial in overseeing such reforms, including recreation of old, or institution of new regulatory mechanisms where the existing ones are no longer operational. Nearly everyone recognized that group ranches, e.g. those attempted in Kenya, failed because they have violated these guidelines as well as having been ill-conceived in economic terms.

(ii) Institutional management of resources

The key to the institutional management of "i, in the pastoral sector is the recognition and, where necessary, the rehabilitation of traditional local institutions that are legitimate in the eyes of the pastoral communities, whose regulatory mechanisms are grounded in the indispensable local knowledge, and which are essential if local peoples are to sustain governmental development initiatives on their

behalf. Two further supplementary points have to be made. First, it is important to recognize that the impact of the colonial rule on pastoral social and political systems was in many instances no less profound, traumatic, and destructive for pastoralists than it was for other rural peoples¹³. Where traditional institutions have been undermined governments must work in collaborative and consultative fashion with pastoral communities to restore weakened institutions or establish new ones that will gain legitimacy as analogous to those previously destroyed (10, 11).

Second, it is necessary to recognize that traditional institutions may have been transformed in ways that cause them to be less legitimate and effective than they were at some indefinite point in the past. They may have been captured by the politically and economically powerful and have become undemocratic to the point that their strengthening will serve principally to increase stratification and marginalization within the pastoral communities. In such situations the relative power of national governments can be directed towards constructive purposes^{14, 15}. Governments can sponsor socio-economic research that will provide information about (a) how the interests of different groups within pastoral communities need to be protected politically, (b) what institutional measures will accomplish those purposes and, (c) what vulnerabilities in local power structures can be exploited to achieve those goals. The result of these investigations should then guide governmental interventions.

5. LIVESTOCK PRODUCTION IN NATIONAL AND REGIONAL ECONOMIES

Many of the central points concerning the role of pastoral livestock production in regional and national economies have been stated or implied above. Among these are the following. First, livestock production often does not receive the attention it deserves in national economic development planning, in part because of the predominance of pastoralists in this sector¹⁶. Livestock and livestock related products are an important factor in many national economies, and

their potential in export income and foreign exchange earning as well as in domestic economies is great.

Second, the management of the livestock sector requires more economic analysis than require appropriate strategies for balancing the capacities for managing drought years with the capacities for good income generation from livestock in excess in good years. The rational pursuit of such income earning opportunities depends upon the accommodation of pastoralists' risk management efforts which in turn depends on how effective herd rebuilding programmes are in post-drought years ¹⁷.

Third, analysis of livestock economies needs to take into account the nature, rationale, and opportunities in pastoralists' shifts between the different types of livestock. These have an obvious bearing on the balancing of consumption needs, domestic and export income earning opportunities, and on the management of drought anticipation risks.

Fourth, analyses and policy formulation must take account of the thin and shifting boundaries, the interdependence of, and the actual and potential synergies between agricultural and pastoral pursuits. Farming systems research, in its original conception, was to focus on the many interrelated facets of income generation and consumption requirements of small farms. The same is needed for pastoralism with special emphasis on the possibilities of balancing agricultural and pastoral pursuits.

Fifth, little is known concerning pastoralists sensitivity to price fluctuations. Such information is central to the evaluation of actual and potential effects of structural adjustment programmes on pastoral communities. The impact of structural adjustment programmes is still in its beginnings. The preliminary estimates suggest a very mixed record in terms of economic growth and a troubling impact on stratification patterns. There seems to be very little information concerning the impact of structural adjustment programmes on pastoralists in particular.

6. THE IMPACT OF THE PROGRAMME AND PROJECTS FOR PASTORALISTS' RECOVERY FROM DROUGHTS

Special attention is due to the impact of particular aspects of government policies on the capacity of pastoralists to withstand and recover from the effects of drought years. These include food security, sedentarization, services refugees, and institution building. Once again many of the key points have been anticipated above.

A. Food security

Pastoralists' food security, especially drought years, is a function of many factors. First, the size and distribution of the herds. Pastoralists are often sooner affected by food shortages than agriculturalists. The price of animals falls remarkably in bad years as a function of over-supply and of their own weak bargaining position. Poor market communications in often remote areas exacerbate the problem. Moreover, sales in drought years diminish pastoralists' capacity to rebuild their economies in good years.

Second, pastoralists' food security is a function of the extent of community reciprocity implicit in their land tenure and common property holding customs. However, such reciprocity can be sharply and adversely affected by the impact of commercial markets and by the resulting patterns of stratification. Animal sharing may well diminish. Thus, food security policies need to include the rebuilding of traditional norms of cooperation.

Third, pastoral food security is affected by patterns of economic diversification. Whether or not diversification is beneficial in food security or other ways depends entirely on what form it takes. Its obvious potential benefits can be negated, for example, if it leads to long distance labour migration and dependence upon income remissions to home areas.

Fourth the potential dependency generating effects of food aid are well known. Constructive enterprise supported by food for work pro-

grammes may not be sustainable when payments in food are withdrawn. Distribution of food may be flawed as between the immediate beneficiaries, mainly men, and those dependent upon these payments, often women and children.

Fifth, food security depends upon adequate drought and post-drought planning. This includes early warning systems; location, organization, and storage of available stocks of food; infrastructure for orderly and efficient destocking at reasonable prices; planning for temporary or permanent transitions of pastoralists to alternative livelihoods; monitoring of emergency humanitarian assistance programmes for equity and efficiency; and orderly and effective post-drought herd/flock reconstruction.

B. Sedentarization

Sedentarization can be positive or negative depending entirely on how it occurs, and is often closely correlated with the extent to which such a transition is voluntary or involuntary. Where pastoralists are driven to sedentarization as a result of agricultural encroachment, compensation for the loss of grazing lands may be essential as well as only equitable. Where such compensation takes the form of settlement schemes, it is important that those schemes be grafted appropriately into existing social structures and accommodate the continuing interdependence of those sedentarized with relatives still in pastoralism. The compensatory settlement schemes in the Awash Valley provide a useful negative example. In this case pastoralists have been compensated while the schemes have relied on migratory agricultural labor, thus in effect extending the encroachment without facilitating the Afar transition to agricultural pursuits. Until only recently these schemes have not accommodated livestock enterprise or recognized settlers' continuing economic and social links to pastoral kinfolk outside the schemes.

C. Services

Pastoralists' marginalization is intensified by less adequate education, animal and human health care, and financial services than the

already low standard that may obtain for the population at large. The difficulties of serving such populations because of their mobility are as well known as recognition of the need to provide them is universal. In the case of financial institutions, one key is to enable financial institutions to channel the savings of richer herders to the developmental requirements of those less well off while providing a return to the lenders. Savings and capital accumulation may gradually and appropriately take more diversified forms and be less concentrated in animals.

Innovative measures are required to provide for the health and educational requirements of partially mobile pastoralists. Knowledge of the special health requirements of pastoralists is important and may be based on existing, reliable local lore. Paramedic and paravet services are potentially useful in pastoral communities, but the support services and local legitimation required for their effectiveness must be established and cultivated. Koranic schools for Islamic pastoralists, boarding schools, mobile schools, adult and non-formal educational programmes are among the initiatives that hold some promise for meeting pastoralists' educational requirements.

D. Institution Building

In addition to what has already been said about institution building in pastoral settings, the following points are most important. Viable effective local institutions must in fact and in appearance belong to the pastoralists. Governmental blueprints cannot be imposed. Rather, officials must facilitate pastoralists' own processes of institutions building or rebuilding, and they must recognize the great local variability in the controlling local circumstances. It is important not to encourage pastoralists themselves to rectify traditional institutions, but rather to encourage and help them to adapt existing institutions to changing local requirements. Management training to assist pastoralists in running their own local institutions is essential, and the training must itself be adapted to local realities. Finally, the limits of local self government must be recognized by the technical aspects of government programmes, and other exigencies

will require articulation between local institutions and the courts and ministries of the national government operating at the local level.

7. CONCLUSIONS

The foregoing observations apply to the circumstances of pastoralists in Africa and the Third World in general. While the circumstances of pastoral peoples in the Horn of Africa appear to replicate those general patterns to a high degree, there are clearly many aspects in which the particular conditions of the Horn of Africa pastoralists individually and as a group depart from the norm. Some of these distinguishing features have been identified above. Others will be brought out in a companion paper. One important task of the conference will be to bring these macro and micro level observations to a focus on the specific policies of Horn governments and the responses to them of their pastoral constituents.

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INSTITUTIONAL ASPECTS OF AGROFORESTRY RESEARCH AND DEVELOPMENT

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Introduction

The history of agroforestry as a science and as a focus for systematic development efforts is very short—fifteen years at the most (see King, this volume). In 1982—the middle ages of this short history—the present writer was asked by the Office of Technology Assessment of the United States Congress to make an evaluation of the role of agroforestry in improving tropical lands. The forecasts contained in that report (Lundgren, 1982a) regarding the likely developments in and constraints to agroforestry over the coming five to ten years generally seem to have been correct. Interest in agroforestry is increasing rapidly among scientists, land-use experts and development professionals; resources for research and development are being made available from donors and national institutions at an unprecedented level (although they are still modest in absolute terms); concrete results from R & D programmes are just starting to emerge on a significant scale; and the next three to five years will see an information explosion in agroforestry. These developments in general, and the progress made in specific fields and regions, are highlighted in other contributions to this volume.

Another assessment contained in the report mentioned above was that the main constraints to a full realization of the potential of agroforestry were of an institutional nature and related to the rigid disciplinary compartmentalization which characterizes institutions working in the field of land use. There have been very few signs in the last five years of this situation changing for the better. On the contrary, it is more urgent than ever that these institutional questions are addressed at the highest possible levels, both individual countries and internationally. If effective and relevant institutional arrangements are not developed for implementing agroforestry R & D programmes on a large scale within the next five to ten years, the risk is very real that the potential of agroforestry will never be fully realized.

This article deals with the institutional aspects of agroforestry. It presents the writer's personal thoughts and should certainly not be seen as an ICRAF policy statement.

Land-use institutions today

The basic institutional structures established to deal with the use of land in virtually all the countries of the world today originate from temperate Europe and North America. There, in the late nineteenth and early twentieth centuries, the modernization of agriculture and forestry, which was necessitated by and dependent upon the rapid industrialization, led to the gradual emergence of government and private institutions to support the land users. Crop production and industrial wood production, which were carried out on separate types of land, required different professional skills, had different aims, and very often were managed by different owners (farmers versus governments or private companies). It was entirely rational, therefore, that agricultural and forestry institutions developed independently of each other. In the few cases where it was deliberately planned that trees, crops and/or animals should interact in specific technologies or land-use practices, for example in windbreaks, shelterbelts, hedges, grazing in fruit orchards, or game management for meat production in forests, there was never any difficulty in establishing which institutional sector was "responsible" for the technology or

practice. With very few exceptions, anything done on designated farmland, even if it involved tree growing, was (and is) the responsibility of the agricultural/horticultural sector, and any use of forest land, including game management, rational utilization of wild berries, mushrooms, etc., falls under the forestry sector.

As a result of these separate institutional developments, there are today different laws and policies governing agricultural and forest land use; there are separate training, education and research institutions; advice to land users is provided through separate extension services; agriculture and forestry normally fall under different ministries or, if they are under the same ministry, under separate departments.

Another important aspect of the land-use legacy from the industrialized countries is that all policies and disciplinary R & D efforts are aimed at maximizing, in a sustainable way, the output of products per unit of land this applies as much to wheat, maize, milk and meat as it does to timber and pulpwood. Commercially oriented monocropping dominates the use of land and has been seen as very successful as markets for agricultural and forest products have continuously increased in volume over the last century. Subsistence use of land, in the sense of people being dependent on their own land for food, has virtually disappeared in industrialized countries.

When the European colonial powers established their administrations in Africa and elsewhere in tropical and subtropical regions, the institutional structures, policies and aims related to land use and development used in the home countries were simply copied in the colonies. This applied also to those countries which were not colonies, e.g., in Latin America, where governments chose to adopt the industrialized countries' institutional structure in land use. The model has been continued after independence in all tropical countries and the post-war international organizations that were set up to assist the emerging nations in improving and rationalizing the use of their land resources are all oriented on conventional-discipline lines. There is little doubt that the concentration of R & D efforts on the particular commodities, technologies and practices which the

monodisciplinary approach leads to, has resulted in some remarkable success stories in tropical countries during this century. Cultivation of export crops such as coffee, tea, oil palm, fruits and spices forms the mainstay of many developing-country economies. Some countries have achieved self-sufficiency in industrial wood production by systematically building up plantations of exotic and indigenous trees, and, most remarkable of all, the "green revolution" of the last two to three decades has turned previously food-deficit countries into major grain exporters. Although all these developments have had their share of criticism (some of it justified, but most based on ignorance) from economists, social scientists and environmentalists, their technical and economic success is an undisputed credit to all the horticultural, silvicultural and agronomic scientists and R & D institutions behind their development.

In spite of the relative successes achieved in agriculture, forestry and other disciplines in the tropics and subtropics (developing countries), there are, quite obviously, many aspects of land use which are not successful. Food production per capita has been decreasing in most of Africa over the last 25 years; man-made desert conditions are spreading at an alarming rate; erosion and flooding, largely as a consequence of defective land use following deforestation, cause unprecedented loss of farmland; rural populations in more and more areas are affected by existing or imminent energy crises due to lack of fuelwood; and the effects of naturally occurring droughts, in terms of loss of human life and livestock become more and more devastating with time. It is open to discussion whether the main causes of these conditions are demographic, political, technological, economic or environmental. It is generally agreed, however, that there is no single cause but rather a complex interaction among several factors-interactions which are different from place to place and country to country.

I have become increasingly convinced that a significant contributor to the failure to solve many important land-use problems is the inappropriateness of conventional discipline-oriented institutions for identifying and addressing real problems in land-use systems in most tropical and subtropical (developing) countries. This particularly

applies to the multitude of subsistence or mixed subsistence/cash farming and pastoral systems in which the vast majority of rural land users live and from which they eke out a living. They differ, of course, with ecological and socio-cultural conditions, from the purely nomadic pastoral systems of the arid to semi-arid zones to the sedentary mixed-farming systems on upland soils in subhumid areas and the shifting cultivation in the humid zones. Some features are shared by most of them, e.g., low cash incomes and, hence, little ability to invest in improvements requiring money, and marginal ecologies, such as infertile or erosive soils, or marginal climates. Minimizing the risk of crop failure or animal loss in these situations is a much more important concern than increasing yields. Often, land tenure is insecure or non-existent. Common lands, which often serve as important sources for fuelwood building material, grazing, etc., are diminishing in area or are being degraded through overuse as a result of increasing populations.

With few exceptions, subsistence or near-subsistence farming systems are mixed in the sense that the farmer produces not only the bulk food crop from the land but also specialized food crops (vegetables, fruits, spices, etc.), animals for meat, milk or draught power, and, very often, trees and shrubs for fuel, fodder and building material. Cash income sometimes comes from specialized crops intended for sale but normally from surpluses of the "subsistence" crops and animals. Obviously, the relative importance of each of these components of the system varies, but they all serve to satisfy basic needs of the land user (food, shelter, energy, cash, etc.), and they all interact economically and/or ecologically in that they are managed by the same limited labour resource and they share the same farm environment (soil, water, topography). The subsistence land user's strategy and aims are to use his labour and land resources to optimize, with minimum risk, the production of various products and services required to satisfy all his basic needs.

Why are today's institutions inadequate?

The fundamental inadequacy of conventional-discipline-oriented institutions lies in the failure to acknowledge and understand these

basic facts, strategies and aims, and in the inability to adapt to them. The aims, infrastructure, rationale and philosophy of these institutions, as well as the training of their experts, are geared to the maximization of individual components, be they food crops, cash crops, animals or trees. There is little understanding that the land user needs to share out his resources for the production of other commodities or services. Even if such an understanding appears to exist—the forester may generously agree that food production is essential and the agronomist may not disagree that fuelwood is needed there is very little technical comprehension of the requirements for producing commodities outside one's own discipline.

The inability of technical institutions and experts to understand how social, religious, cultural and traditional beliefs and preferences can nullify a convincing cost/benefit analysis on, say, increased fertilizer use, upgrading of cattle or establishment of fuelwood plantations, has been so well documented by social scientists that there is no need to elaborate the point.

It is, quite obviously, this lack of understanding of the complexities of many land-use systems, which is built in to the very foundation of conventional institutions, that is the basic cause of the many failures and frustrations in trying to solve the land-use problems of developing countries today. Land users are generally not conservative or "primitive"; they are not adamantly unwilling to improve their lot; they are not opposed to increasing their yields or cash incomes; nor are they hostile to planting and caring for trees on their land—provided we understand how technology changes and improvements fit into their problems, priorities, beliefs and aims. The situation today can be summarized as in Figure 1, which is derived from an idea by R. (Chambers (personal communication)).

There are a large number of more or less narrowly specialized sectors, disciplines, institutions, scientists and experts, laws, policies, etc., all dedicated to maximizing (within limits known to and identified by themselves) "their" product, i.e., which look at one segment of the land-use system only.

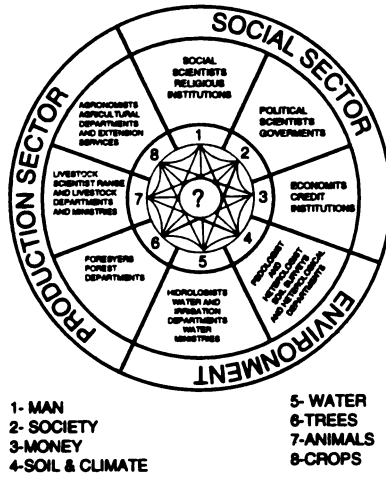


Figure 1. Institutional dilemma of land development? Disciplinary institutions look at a specific compartment of a land-use system only and normally do not consider the complex interactions within the system.

There is no institution today which has both the mandate and the competence to identify solutions to land-use problems based on an interdisciplinary analysis of interactive constraints and potentials within land-use systems, and the power to assign resources in a way that will cut across institutional boundaries in order to implement such solutions.

There are, nevertheless, a few positive signs that awareness of the need to address the institutional constraints to real problem-solving is increasing. For example, the recently published report of the World Commission on Environment and Development (the "Brundtland Commission") (1987) concluded:

The integrated and interdependent nature of the new challenges and issues contrasts sharply with the nature of the institutions that exist today. These institutions tend to be independent, fragmented, and working to relatively narrow mandates with closed decision processes.

Less encouraging, however, is the fact that virtually all recent policy and planning documents from international institutions, even if they pay lip service to the need for multidisciplinary, integrated approaches and holistic views, end up making conventional recommendations such as increased use of fertilizers, irrigation and genetically improved crop varieties, increased tree planting, etc. None contain any critical analysis of the adequacy of existing institutions for addressing the totality of the problems and for contributing to their solution. This applies as much to agricultural (TAC, 1987) and forestry (Adams and Dixon, 1986; Carlson and Shea, 1986) research, as to development statements, again both agricultural (FAO, 1986a, 1986b, 1987; OAU, 1985) and forestry (FAO, 1985; WRI, 1987).

One reason for the slowness with which the institutional problems are being addressed has probably been the lure of the statistics on "global problems" which have emerged over the past 15 years, e.g., on environmental and developmental problems such as desertification, deforestation, the fuelwood crisis and declining food production. As a result of improved techniques of survey, monitoring and other statistical methods, it has been possible to break down an almost infinite number of complex, local problems into their component effects and to add up these effects into global perspectives. Since it is easy to express the magnitude of these problems in conspicuous and alarming global figures, such as the numbers of hectares of forests that are lost, or land that is turned into desert, or the distance people will have to walk every day to collect their fuelwood, it becomes imperative and even very attractive to politicians, decision-makers and institutions to look for simple solutions to these problems and to extrapolate the likely benefits to a global scale. Disciplinary-sector institutions have been very successful in exploiting this situation to increase resource allocation to themselves by promising simple solutions to what appear to be straightforward problems - more tree plantations will solve the fuelwood and deforestation problems; more fertilizers and irrigation will increase food production, and so on.

The fact, however unappealing and complex it may be, is that just as the "global problems" are the sum of the effects of a large

number of local problems, the solutions can only be achieved by adopting an equal number of sound land-use practices and political and economic measures (Lundgren, 1985). Problems must be identified, diagnosed and solved where they occur. It does not help small-scale mixed farmers in district x of country y, to know that 300 million people in the developing world do not have adequate supplies to meet their fuelwood or protein requirements. There is an urgent need to re-think and re-evaluate the situation. The conclusions arrived at must direct the relevant institutions from the discipline-oriented maximization thinking that is fuelled by global statistics to the multidisciplinary optimization thinking that is geared to solving local problems.

Agroforestry as a catalyst for change

When agroforestry was institutionalized through the creation of ICRAF in 1977, there were very few people who thought of the subject as anything but an off-shoot from the forestry sector. Indeed, the early ideas and concepts originated with tropical foresters who were concerned about the poor contribution that the forestry sector made to the well-being of rural populations other than those directly involved in forestry operations. The long and basically positive experience of taungya-type agrosilvicultural systems on forest land had demonstrated to foresters that timber and food-crop production from the same land was possible (King, this volume). In the early stages, agroforestry was seen as the forestry sector's contribution to agriculture and many foresters still think of it in that way. There were no serious efforts to integrate forestry, or rather tree growing, into agricultural practices, let alone any critical analysis of whether the existing forestry institutions were competent to take trees outside the forests.

It was only in the early 1980s that agroforestry developed into a truly integrated and interdisciplinary approach to land improvement, mainly through ICRAF's conceptual and methodological work (Lundgren, 1987b; Stepler, this volume). A more objective definition of agroforestry than previous ones, and one that ICRAF has used since the early 1980s (Lundgren, 1982b), is as follows:

Agroforestry is a collective name for all land-use systems and practices in which woody perennials are deliberately grown on the same land management unit as crops and/or animals. This can be either in some form of spatial arrangement or in a time sequence. To qualify as agroforestry, a given land-use system or practice must permit significant economic and ecological interactions between the woody and non-woody components.

This definition clearly underlines the integrated nature of the approach.

The aim of agroforestry is (or should be) to optimize the positive interactions between components in order to achieve a more productive, sustainable and/or diversified (in relation to the land users' need) output from the land than is possible with other forms of land use. It is obvious that, with this definition and aim, agroforestry as a science and practice must cut across conventional institutional areas and draw upon several disciplines in the social, production and environmental sectors (see Figure 1) if its full potential for improving land use is to be realized.

ICRAF has built up a truly multidisciplinary team of experts and scientists, representing all the relevant disciplines deemed necessary to study all aspects of a land-use system. Through this team, objective analytical methods of identifying problems in land use (farming) systems, and potentials for their solution that are not restricted to agroforestry solutions, have been developed (Raintree, 1987). Using an analogy from Figure 1, this diagnostic and design (D&D) methodology means that instead of the individual experts standing outside the land-use system and observing their own disciplinary components of the system, the whole team, without any preconceived ideas about the nature of the problems and their potential solutions, "parachutes" into the middle of the complex system and tries to diagnose causal mechanisms behind the problems and interactions between the components of the system. From this diagnosis, technologies with a potential for solving the problems are designed. It is only at this stage that the role of different disciplinary sectors and institutions in developing these technologies can be defined.

When putting this methodology into practice in collaborative research programmes with national and international institutions, ICRAF has been faced with a host of problems related to the compartmentalization of conventional disciplinary institutions and professions, ranging from direct mistrust and lack of appreciation of each other's expertise to the enormous difficulty of arriving at decisions about resource allocation in programmes involving different institutions from different ministries.

In the Agroforestry Research Networks for Africa (AFRENA) programme, ICRAF has developed a model for inter-institutional collaboration at national and regional levels which, at least in its early stages, has been very successful (Torres, 1986). The key elements of the approach are to stimulate and assist (technically and, if necessary, financially) national forestry, agriculture and other institutions to work together in analyzing land-use problems and designing research programmes to solve them, and to define their exact role in implementing such programmes. It is essential that participation in these activities is voluntary for the different institutions, that it is seen as professionally stimulating and enriching and that it does not initially "threaten" existing institutional power structures. The technically sound results across disciplinary boundaries that are starting to be produced from such semi-formal programmes show that this approach certainly has potential. Once their usefulness has been confirmed we will be ready to take the next steps required to achieve more appropriate institutional functions and structures for addressing the problems of the small-scale subsistence farmers and land users of the tropics and subtropics.

Agroforestry as a discipline has the potential for taking a leading and catalytic role in this process of change, because of its inherent integrative and multidisciplinary nature, its optimization rather than component-maximization aims, and because of the great interest shown in it today.

Land-use institutions tomorrow

It would be presumptuous to end this article by proposing an "ideal" structure and set of objectives for tomorrow's land-use-related

institutions. No such ideal institution will ever exist because of the enormous variety in conditions, policies and institutions among regions, countries, economies, etc. Some general thoughts on directions may, however, produce some food for thought.

1. In the short and medium term, and within existing institutional structures, collaborative programmes which cut across disciplinary boundaries and address concrete land-use problems must be encouraged and given more support, both at the national level and at the level of international agencies such as donors. UN bodies, and International Agricultural Research Centres (IARCs). It would be appropriate if the international institutions took the initiative in this. Unfortunately, such is not the case today: most international bodies and institutions are firmly entrenched in disciplinary thinking and actions. Although there are a few very encouraging exceptions, integrated approaches still seem far away. With the risk of over-generalizing facts and of stepping on some toes, I feel that it would be encouraging to see the following positive developments on the international land-uses scene:

That the institutions within the Consultative Group of International Agricultural Research (CGIAR) accept the fact that trees and shrubs form integral parts of most small-scale food-producing farming systems in the tropical world and that their rational development can enhance both productivity, sustainability and diversity of food production:

That FAO's Agriculture and Forestry Departments develop joint projects to show that the UN's main land-use-related agency has the interest, mandate and competence to look at crops and trees, and their interactions, in the same place and in the same land-use systems;

That the forestry departments and advisors of bilateral and multi-lateral donor agencies, development banks, research and policy institutes, etc.. accept the fact that tree growing on farmland (agroforestry) is not an exclusive forest-sector activi-

ty, and that the same donors and institutions ask themselves why they channel all their support to agroforestry through forestry, energy or environmental programmes rather than through agricultural programmes.

2. It must be strongly emphasized that in the future we will still need specialized institutions and experts -the plea for multidisciplinary, inter-institutional approaches and integrated thinking must not lead to the formation of super institutions manned exclusively by generalists. Undoubtedly there will be a need for crop physiologists, maize breeders, tree geneticists, fertilizer experts, insect ecologists, and so on, and for specialized institutions that provide a working environment for such experts. Even the most "perfect" interdisciplinarily derived research or development programme must, when being implemented, be broken up into its component parts, and then resynthesized. If there is inadequate expertise on the structure and function of the component parts, then the whole entity (the improved land-use system, or whatever) will never be fully operational and optimized.
3. What will be needed are new institutional functions for problem identification, priority setting and resource allocation, without necessarily making fundamental changes of structure. Such new functions can be created within or between existing land-use ministries and departments, or as independent bodies with existing institutions subordinate to them. It would probably be best to start by creating inter-institutional committees for planning but which will become more and more executive experience is gained. Depending on the problems to be addressed, these committees can then create appropriate task forces of existing disciplinary institutions resources.

These may not sound very fundamental changes but they will require fundamental, rethinking among disciplinary scientists, institutions and decision-makers. The sooner process starts, the faster can some of the key land-use problems of the world be solved.

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4

Chapter

A METHODOLOGICAL APPLICATION OF SUSTAINABLE MICROREGIONAL DEVELOPMENT

Spatial Analysis For Regional Development: A case Study in the Bicol River
Basin of the Philippines

D. Rordinelli

SPATIAL ANALYSIS FOR REGIONAL DEVELOPMENT

A Case Study in the Bicol River Basin of the Philippines

D. A. Rondinelli

INTRODUCTION

Despite the impressive progress made in economic and social development in much of Asia over the past three decades, a substantial proportion of the population in Asian societies remains in dire poverty, and the gaps between the richest and poorest groups continue to widen. The World Bank has found that two-thirds of the world's poorest people -those living in "absolute poverty" with incomes of less than US\$50 a year- can be found in Asia. Most are concentrated in Bangladesh, Pakistan, India, and Indonesia, but large numbers of people also live at or near subsistence levels in rural hinterlands and on the fringes of the urban economy in Thailand, Burma, Sri Lanka, Malaysia, Korea, Nepal, the Philippines, and other Southeast Asian countries. In its study of poverty in rural Asia, the International Labour Office notes that over the past two decades the incomes of many of the rural poor fell and the percentage of the rural population with incomes below the poverty line increased. The inequitable distribution of income and wealth in some countries was more pronounced by the middle of the 1970's than at the beginning of the 1960's.²

The distribution and severity of poverty within Asian countries are related to patterns of regional resource development. The limited access of some regions and population groups to the natural and man-made resources needed to satisfy basic needs, increase productivity, diversify economic activities, and raise incomes is an underlying cause of poverty. Growing disparities in levels and rates of growth are evident between those countries that have been able to use their resources effectively to stimulate agricultural and industrial development, and those unable to mobilize resources for productive purposes.

Serious disparities in levels of development and standards of living also appear between urban and rural areas, and among subnational regions with different levels of resource endowment and productive assets.

I. MARGINAL RESOURCES AND REGIONAL DEVELOPMENT

“Marginality” is a distinguishing characteristic of nearly all who live in poverty. In much of Asia the poorest groups inhabit sparsely populated and ecologically hostile environments -marginal and infertile areas subject to recurrent natural hazards such as droughts, floods, and insect plagues. The natural adversities are often exacerbated by man-made hazards of accelerating environmental destruction. These marginal zones are usually incapable of yielding large agricultural surpluses using traditional methods of cultivation, and the huge differentials in productivity between better-endowed and marginal zones within the same country often squeeze marginal people out of agricultural markets entirely, invariably leaving them more impoverished. The World Bank estimates that 40% of the world's poorest people live in areas with seriously adverse climatic and ecological conditions -regions such as the arid and semi-arid uplands of Iran, most of the Himalayan chain from Afghanistan to Burma, vast drought-prone tracts of India, the swampy lowlands of Indonesia and East Malaysia, and the Philippine uplands and river basins.³

But the majority of Asia's poor live in densely populated areas with relatively favourable climates and with vast and potentially produc-

tive resources. They remain poor because of their marginal access to the means of procuring, transforming and delivering those resources more productively.⁴ They inhabit areas where competition for existing resources, especially agricultural land, is intense; where the physical, social, and administrative infrastructure needed to transform and use resources is scarce; or where deliberate patterns of government investments have placed them at a locational disadvantage for competing with other regions in national and international markets.

In most of Asia the intense competition for arable land is a primary cause of poverty. "Within the rural sector", the World Bank has found, "at the very core of the poverty problem are families who either own and cultivate very small holdings or own no land at all."⁵ Severe pressures on land resources from high rates of rural population growth are expected to continue in south and southeast Asia for at least the rest of this century.

But problems also arise from the marginal use of existing resources: from the inability to identify productive uses for indigenous resources or from inefficient practices of resource transformation and delivery. The inefficient use of labour -its low productivity and sporadic employment- in rural areas is perhaps the most apparent example of under-used resources in Asia. The ILO has found, however, that "labour is not the only resource that is poorly utilized; in many countries land and other resources are not efficiently exploited." Inefficient farming practices reduce the overall productivity of land in many regions. Excessively long fallow periods, low intensity of cropping, large amounts of land left in natural pastures, and similar practices -especially on larger farms- reduce the possibility of raising yields from existing arable land. "At the same time," ILO analysts note, "many of the smallest farmers are forced to overexploit their land, with the result that useful land is destroyed through exhaustion of soil fertility."⁶

Inefficient or inadequate use of existing resources is often caused by another form of marginality: the limited access of the poor to supplementary services and facilities needed to procure, transform, and

deliver productive resources. In many regions of Asia the intense competition for available resources is exacerbated by lack of credit facilities for small farmers and entrepreneurs, the shortage of marketing centers, the inadequacy of co-operative organizations or other arrangements for transporting and selling goods, poor communications, insufficient physical infrastructure and poorly organized agricultural extension services. Most subsistence activities, moreover, depend entirely on manual labour or animal power, sometimes aided by handmade, simple implements. New forms of technology needed to transform resources and increase the productivity of labour are not available to the rural poor. In addition, the administrative and institutional arrangements needed to maintain supplementary resources are often inadequate or missing entirely.⁷ "Underutilization of labor and land often is accompanied by underutilization of capital," ILO analysts found. "Large irrigation facilities are not used to capacity; irrigation canals and drainage ditches are allowed to fall into disrepair; fish ponds are permitted to become overgrown with weeds, mechanical equipment becomes inoperative because of poor maintenance and lack of spare parts."⁸

Moreover, the rural poor generally lack access to town-based facilities and the health, education, and social services that would allow them to increase their productivity. Nor can they easily learn of new ways of identifying potentially productive resources or of using them more effectively. The limited access of rural people to market towns and small cities, in which the services and facilities needed to support rural resource development are located, places them at a serious disadvantage.

Marginality and Development Policy

The marginality of poor regions in Asia is not due entirely to differences in natural resource endowments. Disparities among regions in income and wealth -and in the overall ability to exploit existing resources productively- are often created by public investment and development policies. "The unequal distribution of benefits among

the population and the unbalanced pattern of sectoral development that characterize Philippine growth for much of the past three decades," the World Bank insists, "was closely linked to resource management policies and to patterns of resource allocation."⁹ In many of the developing nations of Asia, as in the Philippines, investments were heavily concentrated in large-scale, capital-intensive industries, usually located in a primate city or a few metropolitan centers, and allocated to physical infrastructure development in a few favored regions, usually in and around the metropolitan centre.¹⁰ The concentration of productive assets in the primate cities allowed these centers to exploit opportunities for development, create competitive advantages over other locations within the country, and drain peripheral rural areas of their resources.

These favored locations now have concentrations of productive and social overhead assets vastly greater than their share of national population. They continue to attract human and capital resources from rural regions, thereby slowing or retarding rural development and maintaining subsistence populations in poverty. In the Philippines, for instance, although Manila has only about a quarter of the national population, it accounts for more than 72% of the nation's manufacturing firms, 80% of all manufacturing employment and production, and 61% of the nation's hospital beds. It consumes 83% of the nation's electrical power and generates more than 65% of the country's total family income.¹¹ Similarly, Bangkok absorbs about 65% of the annual investment in construction in Thailand, has 72% of all commercial bank deposits, consumes 82% of the nation's electrical power and has 77% of the nation's telephones.¹² Jakarta's growth is due in large measure to the overwhelming share of foreign and domestic investment it receives compared to other areas of Indonesia and to its percentage of the national population. Between 1968 and 1972, more than 32% of domestic investments and 20% of foreign investments approved by the government were located in Jakarta, which during that time had about 4% of Indonesia's population.¹³

The relatively high levels of economic development in the Central Luzon and Southern Tagalog regions of the Philippines cannot be

attributed solely to their natural advantages. They are the result of sustained concentrations of public and private investments in infrastructure, services, and productive activities in these regions over a long period of time. In every aspect of economic and social development, these regions now have advantages over all others in the country. Agricultural production in Central Luzon outpaces that of other regions because 50% of its cultivated land has been irrigated, as opposed to 13% of cultivated areas in the rest of the Philippines. The region reports the highest percentage of farmers obtaining credit from institutional sources and greater access to fertilizers and other farm inputs than other regions of the country. For over a quarter of a century these two regions have received preference in government resource allocations. In fiscal years 1959 to 1961, for example, nearly 57% of infrastructure expenditures were made in these two regions, slightly more than 70% of expenditures on ports and harbours, 49% on waterworks, 61% on flood control and drainage, and almost 70% on buildings, schools, and hospitals were made in and around metropolitan Manila. From 1971 to 1973, these two most urbanized regions received 56% of all infrastructure investments, 64% of port projects, 91% of waterworks, 63% of irrigation, 67% of flood control and drainage projects, and 60% of buildings, schools, and hospital investments.¹⁴

Moreover, Central Luzon and Southern Tagalog were favored with higher allocations for social services and economic development expenditures. Nearly two-fifths of all community development projects funded between 1956 and 1973 were concentrated in these two regions, and 43% of the enterprises assisted by the National Cottage Industries Development Administration (NACIDA) were found there. Indeed, these two regions accounted for nearly 70% of the total capitalization of all NACIDA projects by 1972. More than 43% of the Board of Investment's (BOI) large-scale industrial assistance, by 1973, was allocated to firms located in these regions.¹⁵

It has become increasingly clear that the over-concentration of social and productive investments in a few favored locations is not

only detrimental to the marginal regions excluded from development, but to national economic progress as well. The inability to mobilize and use resources to develop marginal regions not only contributes to geographically unbalanced and socially inequitable growth, but leaves large numbers of the population on the fringes of, or excluded entirely from, the national system of production, exchange, and consumption, thereby constraining expansion of the domestic economy. Indeed, the only market economies in Asia that have been able to grow rapidly with relatively equitable distribution of benefits are those that have taken strong measures to develop resources widely and to increase the access of a large majority of the population to productive assets and skills.

Rao notes of Korea, for instance, that "the broad distribution of land contributed importantly to the fact that farmers gained equitably from the growth of farm incomes, and the early spread of education enabled a wide segment of the population to participate in the rapidly expanding modern manufacturing sector and was instrumental in the extensive modernization of agriculture."¹⁶ In Taiwan, strong emphasis was placed on developing agricultural resources throughout the country, equalizing wages and prices between urban and rural sectors, and decentralizing industry to peripheral areas. Moreover, in both Korea and Taiwan, physical infrastructure and basic social services were widely distributed in order to increase the productivity of labour and to enhance the capacity of rural villages to become economically viable. Taiwan extended rural roads to all parts of the island, expanded rail systems, created rural industrial estates, strengthened farmers' associations, and assisted raw materials-based industries in marginal areas.¹⁷ In Korea, primary and middle schools are well dispersed and are within easy access of most rural villages. Most villages are connected by roads and have access to telephone communications and electrical power. The government's Saemaul Undong programme continues to provide assistance for self-help projects in rural villages to increase their self-reliance, mobilize leadership and raise productivity.¹⁸

II. SPATIAL DIMENSIONS OF REGIONAL RESOURCE DEVELOPMENT

Studies of economic development in both industrially advanced and developing nations have shown that a key to internal economic growth has been the creation of mutually beneficial relationships between urban centers and the countryside. The emergence of a spatial system that stimulated the commercialization of agriculture, allowed natural resources from rural regions to be used productively within those regions, facilitated the dissemination of innovation and the delivery of public and commercial services, aided in the efficient production and exchange of goods throughout the national economy, and drew larger numbers of the population into productive economic activities, was crucial to widespread development.¹⁹

But in much of Asia such spatial systems are not well developed; systems of central places of different sizes, performing specialized functions, widely dispersed but linked together in a mutually beneficial system of production and exchange, have not yet emerged. Economic development has generally been dualistic, and the over-concentration of investments in infrastructure and services in one or a few major urban centers has created polarized spatial systems that inhibit further expansion of the domestic economy, adversely exploit the resource base of marginal regions, and prevent widespread distribution of the benefits of economic growth. In many countries, as in the Philippines, Thailand, and Indonesia, production and infrastructure investments have been so heavily concentrated in one major city and region that over time the largest metropolitan area has attained "primate city" status. That is, the city has grown so large as to dominate the entire national economy. Secondary cities either do not develop, or grow very slowly. They are usually few in number and not distributed widely enough to act as catalysts for development in marginal regions. In highly polarized spatial systems, market centers are usually small and scattered, and are poorly equipped to provide services to rural areas. Small cities and market towns are not efficiently linked to each other or to larger urban centers and thus marketing networks that could integrate rural area economically and

incorporate marginal populations cannot easily emerge. A large percentage of the urban population lives in the primate city and a few other secondary centers; but the overwhelming majority of people remain in rural areas, scattered in small settlements that are not large enough to support basic services and facilities needed to promote economic growth and resource development.

International assistance agencies and governments in developing countries have increasingly recognized in the past few years that if they are to ameliorate rural poverty, integrate marginal areas, and incorporate subsistence population groups into the national economy, they must promote a more spatially balanced pattern of development based on "bottom-up" stimulation of rural economies. Redistribution alone would do little to overcome rural poverty of the magnitude found in Asia. The emphasis on "growth-with-equity" would require the development of new resources within developing countries and the steady inclusion of marginal and subsistence populations in productive economic activities. This in turn would require extensive investment in physical infrastructure, services, and productive activities in rural regions, located strategically in intermediate sized cities, smaller towns, and rural market centers. The growth of "rural service centers" that could link towns to rural hinterlands would also be encouraged in order to increase the access of the rural poor to basic services and facilities.²⁰ The investments, moreover, would have to be located in such a way as to create an articulated and integrated regional spatial system capable of facilitating: 1.) the extension of markets for increased agricultural production and other rural resources, thereby raising income for rural families; 2.) more widespread distribution of services such as health, education, family planning, and vocational training, the technical inputs needed for increased agricultural production such as new seed varieties, appropriate technology, farm-to-market roads, and rural electrification, as well as communications and transportation; 3.) creation of new rural employment opportunities, especially in agro-processing, agribusiness, small-scale manufacturing, and cottage industries that use local resources as the primary inputs for production; and 4.) a slowdown the rate and an alteration in the pattern of rural to urban migration.²¹

But the pattern and composition of spatial systems and the roles of various types of settlements differ drastically among developing nations, and any serious effort to shape spatial systems to promote more equitable and widespread development, especially in marginal zones, requires careful analysis and planning. Ruddle and Grandstaff point out two of the dangers of inappropriate development policies in marginal regions. First, they note that these areas are not necessarily ecologically marginal and that the ecological stability of more populated and developed regions often depends on the stability of marginal areas. Major disruptions of ecological systems in marginal areas could have adverse effects on more developed areas of the country. Moreover, if development is inappropriate or ill-considered it would likely leave people in marginal regions worse off and more alienated. "Marginal area populations are particularly susceptible to this because their resource systems and ways of life are often radically different from those of more developed areas," they note. "There is, therefore, a real likelihood for increased poverty, alienation and cultural disintegration under conditions of radical disruption."²² In the past, however, spatial analysis for regional development had been constrained by three other problems: the failure to recognize the importance of spatial factors in national and regional resource development; the lack of an operational framework for integrated spatial analysis; and the paucity and unreliability of data in rural regions for formulating effective development plans.

This paper describes and evaluates a pilot project undertaken from 1976 to 1978 in the Bicol River Basin of the Philippines to address these problems and to develop an operational framework for integrated spatial analysis and regional resource development. It describes the background and rationale of the project, outlines principles for selecting applied research methodologies, describes the methods and techniques that were used in the Bicol River Basin, and compares them with methodologies tested in previous experimental projects in other developing countries. In addition, it identifies the results of the project and evaluates the behavioural and organizational problems of implementing it.

The Bicol project is of general interest to resource development planners for three reasons. First, the analyses employed in the Philippines are potentially replicable, with appropriate testing and adaptation, for integrated spatial development planning in rural regions of other developing countries. Second, the problems of designing applied policy analyses for spatial development in Bicol are quite common in much of the developing world. And, finally, the results of the analysis provide insights into the spatial dimensions of regional resource development, especially the relationships between urban and rural sub-systems.

III. BACKGROUND AND CONCEPT OF THE “URBAN FUNCTIONS IN RURAL DEVELOPMENT” PROJECTS

The Bicol River Basin of the Philippines was chosen as the site for the first of a series of projects to test approaches to and methodologies for strengthening urban analysis and for locating services and facilities in urban centers that can promote rural development.²³ The designers of the project contended that spatial factors were crucial to the success of the “new directions” in international aid policy, which is aimed at assisting the poor majority in the Third World, primarily through intensified rural development. Moreover, they argued that the functions of urban centers are essential to stimulate growth in rural economies and to increase the access of the rural poor to those services and facilities needed for development. “In addition to being the loci of opportunities for off-farm employment,” they noted, “urban centers provide marketing, storage, processing, supply, credit, health, educational and other services to the rural areas they serve.” They concluded that rural areas without access to urban centers and services cannot prosper and “those without access to fully functional and efficient (urban) centers are denied their full development potential.”²⁴

The projects would both gather additional information about the nature of the relationship between urban and rural development and test analytical and planning methodologies for promoting integrated

spatial development in rural regions. The sponsors of the Bicol study pointed out that:

The linkages between rural development and urban centers are clear, and the existing literature identifies and provides considerable insight into the kinds of general services and functions required at the level of the rural market town to support rural development. Less progress has been made in identifying similar facilities and services at other levels of the urban hierarchy -i.e., in the regional and supraregional centers- and little has been written of a comprehensive nature. More understanding is needed of the mix, magnitude and timing (i.e., order of priority) and location of facilities and services at all levels and for different types of agricultural patterns. In addition, practical information is needed on alternative ways of providing the required services and facilities.²⁵

The ultimate outputs of the pilot project would be a process of analysis and a "package" of analytical techniques and methods for planning that would assist developing country planners to design policies and programmes for strengthening the role of urban centers in rural development. The methods tested and proven effective in these developing countries would be disseminated to development institutions throughout the world.

The Conceptual Framework

The importance of the spatial dimension to "growth-with-equity" policy was strongly confirmed in preparatory research conducted in 1976.²⁶ The study found that spatial systems in most developing countries were not conducive to equitable growth. Although metropolitan centers and smaller cities could play an important role in stimulating rural economies, in most less-developed countries they were not well dispersed, and were often poorly linked to rural hinterlands and, thus, the rural poor generally lacked access to the services, facilities, and productive activities located in them. As a result the cities did not provide inputs needed to develop new resources,

increase agricultural production, or meet basic human needs in rural regions.

The report proposed a general framework for analysing rural regions and determining the degree of articulation and integration of the settlement system, and the linkages between urban and rural areas. Functional analysis of settlement systems in developing countries could help determine the types of "urban" services and facilities needed at each level of the spatial hierarchy and the means of providing better access for the rural poor to those functions. The study pointed out, however, that any analytical framework would have to be modified in application, adapted to local conditions, and tested in a number of developing countries. The scarcity of data and general unreliability of statistics in developing nations, and the need for analytical techniques that could be easily applied by planners and readily understood by policy-makers in rural regions, mandated substantial testing through experimental and pilot projects.

The report suggested that the pilot projects focus on three areas of analysis.

1. *Analysis of Regional Resources and Activities:* including such factors as physical characteristics of the region, land and resource uses, cropping patterns, volume and diversity of agricultural production, population distribution and rural settlement patterns, services and facilities distribution, non-agricultural and commercial activities, and subsistence system characteristics.
2. *Analysis of Central Places:* including the location of market towns, small cities, intermediate or regional centers; the size, composition and density of towns, the location, concentration and dispersion of central functions, changes in the size and concentration of social and economic activities over time, and the labour force and income distribution characteristics of settlements.

3. Analysis of Regional Spatial Linkages: including physical, economic, population movement, technological, social service delivery, political and institutional interaction patterns among settlements within the region, and linkages with external centers.

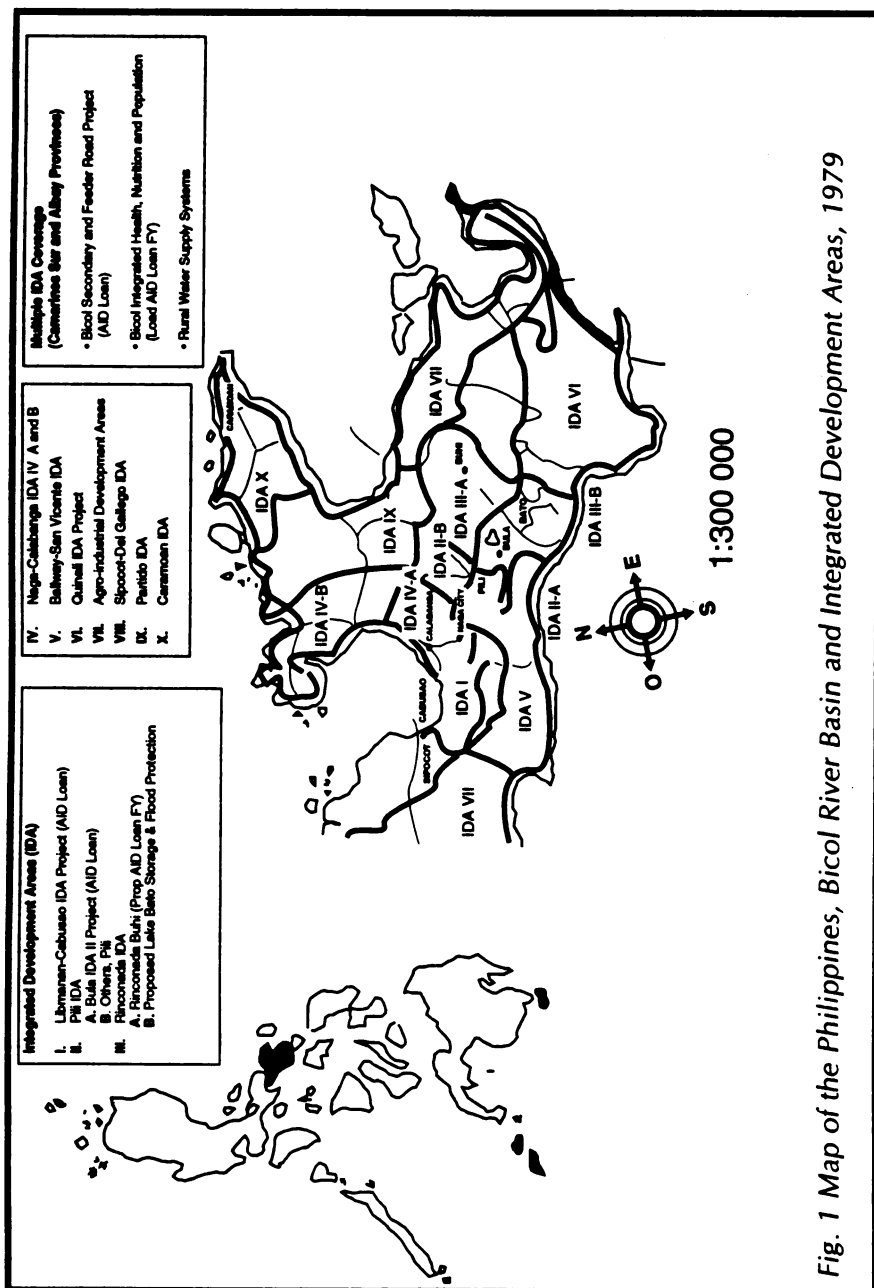
A number of specific analytical techniques, and the types of information needed to apply them, were also delineated. The report emphasized, however, that the pilot projects should be tailored to the needs and constraints found in the regions under study. A pre-designed package of methods could not be imposed; methodology should be designed in collaboration with planners and researchers in the country chosen for study only after initial data inventories and surveys of available information were conducted.

IV. SELECTION OF THE BICOL RIVER BASIN

An economically depressed region on the southwestern end of the Luzon peninsula, the Bicol River Basin manifests almost classic characteristics of marginal areas in developing countries. The Basin's marginality is owed in part to its physical isolation from Manila and other regions of the Philippines and to a physical environment that is hostile to productive activity for much of the year. Income is low and inequitably distributed. Production and marketing technologies are inefficient compared to the rest of the Philippines and other Asian countries. Infrastructure and capital are scarce and local government institutions are weak and ineffective. High rates of population growth prevent appreciable increases in standards of living even in developing sections of the Basin, and in much of Bicol the land-tenure arrangements constrain increased agricultural production and more equitable distribution of income. Poverty and the lack of modern sanitation facilities perpetuate widespread health and nutrition problems.²⁷

Background and Conditions

The Basin is a sub-area of the Bicol Region consisting of two provinces -Camarines Sur and Albay- with 700,000 acres of land, about half of which are arable, and nearly 1.8 million people.²⁸ (See Fig. 1.)



For decades, the Bicol River Basin has experienced high levels of rural poverty. The predominantly subsistence agricultural economy has created chronic underemployment and serious malnutrition among the population and encouraged relatively high rates of migration. In 1971, over 80% of the population had incomes below the national poverty level. By 1975, nearly 90% of the Basin's families had annual incomes below the poverty threshold and nearly 65% had incomes of less than half of the poverty mark, classifying them as the "poorest of the poor" (Table 1). About 28% of the labour force is either unemployed or seriously underemployed, and non-agricultural job opportunities in the Basin's towns and villages are limited. Income levels of the Bicol River Basin's population are not only low, but income and wealth are inequitably distributed. Ten percent of the households in the Basin receive 43% of the total income, and the poorer 50% of the population receives only 13% of income. The poorer half lives on about US\$45 *per capita* a year, only enough to buy rice, occasionally some fish, and the barest necessities of life.²⁹

Standards of living in the Basin are far below those of the Philippines. Although outright starvation is not prevalent in the area, 80 % of pre-school children suffer from serious malnutrition. A majority of the population is inflicted with water-borne enteric diseases and intestinal parasitism, resulting from contaminated water supplies and poor environmental sanitation. Nearly 73 of every 1,000 infants born in the Bicol River Basin die during their first year, primarily of pneumonia, gastro-enteritis, and bronchitis. There is only one physician for every 4,600 people and most of the doctors are located in larger towns, inaccessible to rural people. Surveys estimate that no more than one-quarter of all women living in the Basin have ever visited a health clinic, hospital, or family planning centre; most rural families seek assistance from healers, or from midwives during pregnancy. Housing conditions outside of the larger towns are also poor. In rural areas homes are built of scrapwood and nipa, with grass roofs and bamboo or dirt floors. Less than one-third of the Basin's households have adequate water supplies or sanitary toilets. Sounder structures, more typical of the towns, are scattered in rural

TABLE 1. Regional Poverty Threshold and Income Levels, Philippines 1971 and 1975

Region	Number of families (in thousands)		Average family incomes (in pesos)		Families with income below food threshold, 1971		Families with income below poverty threshold, 1971	
	1971	1975	1971	1975	Number (000s)	Per cent	Number (000s)	Per cent
Ilocos	346	558	3,299	5,525	213	72.6	447	85.2
Cagayan Valley	260	329	2,390	5,102	231	75.8	293	84.8
Central Luzon	855	662	4,127	5,773	224	36.5	178	68.5
Southern Tagalog	869	888	4,332	5,441	436	30.6	466	54.5
Bicol	496	518	2,784	4,280	351	70.9	759	87.3
Western Visayas	670	679	3,260	5,484	418	65.3	419	84.5
Central Visayas	980	441	2,548	4,834	388	70.7	572	85.4
Eastern Visayas	NA	595	NA	5,172	718	73.3	847	86.4
Western Mindanao	522	370	3,062	3,803	NA	NA	NA	NA
Northern Mindanao	825	433	3,577	6,307	339	65.1	449	86.1
Southern Mindanao	NA	314	NA	5,662	480	58.3	654	79.8
Central Mindanao	NA	301	NA	5,025	NA	NA	NA	NA
Manila and Suburbs	525	770	7,785	10,469	128	24.7	NA	NA
The Philippines	6,347	6,859	3,736	5,840	3,774	59.0	5,039	79.4

Sources: National Census and Statistics Office, Special Release N° 190, and National Economic and Development Authority, Statistical Yearbook, 1975. Manila: NEDA, 1975

barangays, but the overwhelming majority of houses throughout the Basin are constructed of weak building materials and are highly susceptible to fire, flooding, or destruction during typhoons. Few homes are served by piped water or electricity; in the vast majority kerosene or wood is used for lighting and cooking.

The population growth rate of 3.3% a year results in a high dependency ratio -nearly half of the population is under 14 years old- and more than 1% of the population migrates out of the Basin each year. Most migrants are younger, more productive people seeking job opportunities in larger towns outside the Basin, and usually in metropolitan Manila. The Bicol Region, of which the Basin is a part, has had the lowest net domestic product (NDP) in the Philippines over the past decade; it declined in real terms by an average of 1.5% between 1972 and 1974, at a time when the national average was growing by nearly 4%. The Bicol Region in the early 1970's had the lowest share of employment and production among all regions in the Philippines as well as the lowest proportion of modern manufacturing establishments to population in the country. Indeed, the only industrial capacity in the Basin takes the form of small, family-owned agro-processing and cottage industries. Nearly all manufactured goods sold in Bicol are imported from Manila.³⁰

Development Problems

Ironically, most Bicolanos live in poverty in a land of great natural beauty and abundant natural resources (Fig. 2). Properly irrigated and cultivated, the Basin's rich alluvial soil could produce enough rice to sustain an additional 8 million people. Production of corn, abaca, sugar, coconuts, and vegetables is only a fraction of the Basin's potential under favourable conditions. The Bicol also has a wealth of untapped mineral resources -about 30% of the marble deposits, 75% of the perlite and about 20% of the coal reserves of the Philippines. The Tiwi geothermal plant, located on the Basin's northeastern border, will soon generate substantial amounts of relatively cheap energy.

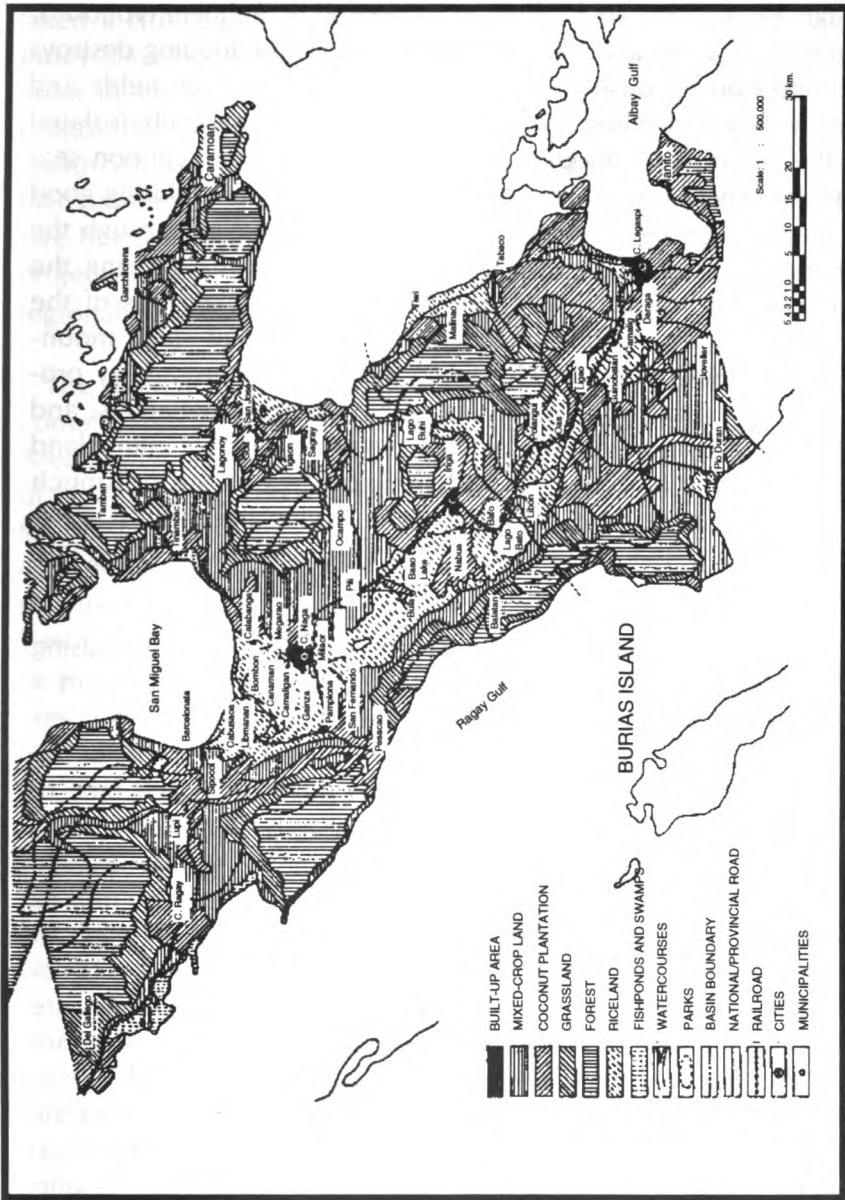


Fig. 2 Existing Land-use Map of Camrines Sur and Albay Provinces

But as a regional economy, the Bicol River Basin currently is poorly equipped for increased productivity and widespread development. Through much of the year the Basin is battered by frequent typhoons, bringing high winds and heavy rains. The perennial flooding destroys crops and homes, pushes saline water into interior rice fields and causes widespread silting and erosion. The area is physically isolated from the rest of the Philippines during the worst of the typhoon season and poorly linked to other regions or to Manila even during good weather. A single paved highway that weaves tortuously through the mountains of central Luzon connects Bicol to Manila. During the typhoon season even this link becomes tenuous as sections of the road are washed out and collapse down the sides of steep mountains. Daily flights to and from Manila, buses, and one railway provide limited capacity for travel or interregional communications, and small ports in coastal villages provide limited access for inter-island trade. Regional transportation and communications are not much better, limiting travel and marketing, and leaving the Basin's settlement system a scattering of relatively isolated and poorly integrated clusters of villages.

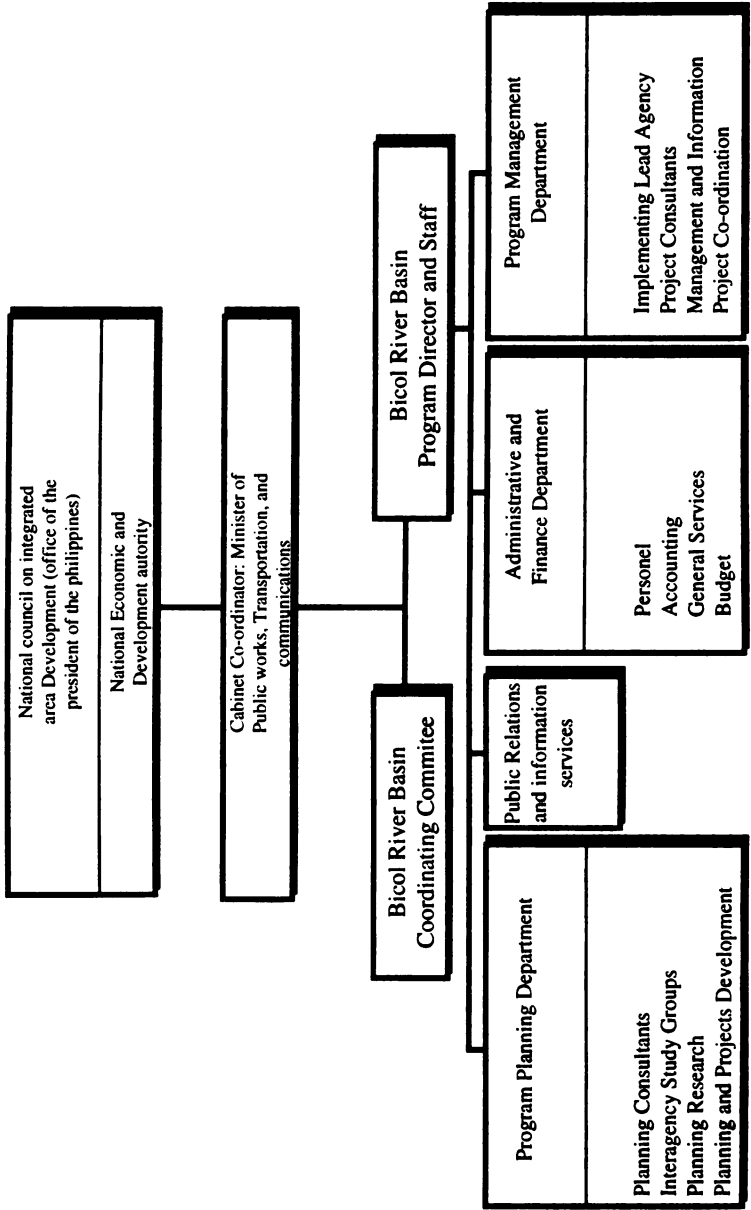
Nor are current land-tenure arrangements conducive to increasing family incomes. Farmholdings are small and fragmented. From a third to half of all rice and corn farmers work as tenants or landless labourers, and farm productivity is nearly 10% lower than that of the Philippines. Owners of large landed estates have reinvested little of their profits in the Basin over the years, and agricultural technology on both large and small farms is primitive. Manpower and draught animals provide the bulk of agricultural labour. Relatively few milling or processing facilities have been established, marketing networks in rural areas are poor, and storage capacity is limited. Because productivity and income are so low, both tenants and small landowners are continuously in debt. Whatever small surpluses they accumulate are quickly spent on baptisms, weddings, funerals, children's schooling, and the annual fiesta, and on repaying loans. Only about half of the Basin's 100,000 hectares of potentially irrigable ricelands are irrigated; nearly 50,000 hectares of prime agricultural land is flooded during the typhoon season and that located adjacent to the Bicol River suffers from saline intrusion.

Because of its large size, rich potential, and severe poverty, both the national government and international assistance agencies have taken a strong interest in the Basin's development. The Bicol River Basin Development Program (BRBDP) was established by executive order in 1973 and strengthened by presidential decree in 1976. The programme seeks to promote development of agriculture, natural resources, infrastructure, social services, and private sector investment through integrated rural development; to provide comprehensive but decentralized planning and management of programmes and projects; and to combine national with local resources in attaining regional development goals.³¹

The BRBDP and three other regional development programmes come under the jurisdiction of the National Council on Integrated Area Development (NCIAD), which was recently placed in the Office of the President. The Minister of Public Works serves as co-ordinator for BRBDP and regional directors of national ministries and agencies operating within the Basin; the governors of the participating provinces and the BRBDP programme director form the Bicol River Basin Coordinating Committee (BRBC). A council with representatives from private business, farmers, and religious groups, the media, and civic and youth organizations advises the programme. To facilitate local planning and programme implementation, the Basin is divided into Integrated Development Areas (IDAs), each with a development team headed by a municipal mayor, and consisting of local government officials, community leaders, and technical personnel from national ministries and line agencies working in the Basin. These area development teams are assisted with planning and technical tasks by BRBDP and line agency professional staff (Fig. 3).

Development planning, technical studies and project design have been funded in part by grants and loans from the US Agency for International Development in amounts about equal to those provided by the Government of the Philippines. Thus far, three major capital construction projects in water resources development and secondary and feeder roads are underway and one is in the design stage. Comprehensive studies of water resources, land classification and

Fig. 3 Organizational Structure of Bicol River Basin Development Program



mapping, intermodal transport, hydrometeorology, and other have been completed. Data collection and feasibility studies for agricultural education, health, nutrition, and population planning, crop production, and compact farm projects are in progress, as is a comprehensive socio-economic survey that will be updated every three years. An agribusiness reconnaissance survey, pre-feasibility studies, and rural industry analyses have recently been initiated.

Future Development Plans

Early success with regional planning and development in the Basin has attracted the attention of other assistance organizations. The World Bank, the Asian Development Bank (ADB), and the governments of Germany and Japan have expressed interest in assisting with various projects identified in the Bicol Comprehensive Plan for 1978-1987. Over the next decade extensive physical infrastructure, agricultural production, agribusiness, small-scale manufacturing, and social services projects are planned for the Basin (Table 2), some of which were included in proposals presented to the World Bank Consultative Group meetings in Japan in 1978. A second farm-to-market road construction programme, estimated to cost more than US\$40 million, has been identified. The World Bank and the Japanese government are now funding some road projects and the ADB is financing rehabilitation of the railroad from Manila to Bicol. In addition, the ADB has expressed willingness to consider proposals for loans to supplement government irrigation and agricultural activities in several IDAs. Germany and Japan have sent representatives to investigate possible investments, particularly in the industrial IDA. A World Bank loan is proposed for upgrading the quality and expanding the facilities of local agricultural colleges. Moreover, both the World Bank and ADB may assist with projects to upgrade smaller ports in the Basin, extend and improve domestic water supplies, and contribute to agribusiness, fisheries development, and rural industry studies. USAID is expected to continue providing financial support for planning and project preparation, capital projects in some IDAs, an integrated project for health, nutrition, and population, and for technical assistance to augment the BRBDP's growing staff of trained planners, technicians, and administrators.

Table 2. Bicol River Basin - IAD Agricultural Development Implementation Schedule

Project/Component	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
Physical Infrastructure										
A. Transportation										
1. Secondary Roads Rehab/Upgrading Construction										
Maintenance										
2. Feeder Roads Rehab/upgrading Construction										
Maintenance										
3. ports Improvement/ports of entry improvements/municipal ports										
4. Airport Upgrading										
B. Telecommunications										
C. Water resources										
1. Irrigation/drainage										
2. Food control										
3. Domestic Water										
4. Watershed management										
D. Power/rural electrification										
E. Social Infrastructure										
Agriculture										
A. Production Intensification										
B. Watershed protection										
C. Natural resources conserv.										
Industry										
A. Agri-business industries										
1. Food Processing										
2. Storage/warehousing										
3. By-product utilization										
B. Household industry										
C. Complementary industry										

Project/component	YEAR										
	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	
Social development											
A. Health, nutrition, population											
B. Research and extension											
C. Land reform, housing, human resources devel.											
D. Institutional development.											
Support projects											
A. Feasibility studies											
B. Agricultural support											
1. Land and soil resources inventory											
2. Land use hydrology											
3. Land Utilization type development											
4. Timer, water impounding, breeding stations											

Source: Republic of the Philippines, Bicol River Basin Development Program, Ten-Year Development Plan CY 1978-1987

The “Urban Functions in Rural Development” Project

Thus, the Basin was chosen as the site for the first in a series of pilot projects for integrated spatial analysis, not only because of its marginality and high levels of poverty, but also because a regional planning and development agency -the Bicol River Basin Development Program- was willing to undertake the study, and because of the relatively good data base found in the Philippines. Highly trained local manpower was available and capable of implementing the project successfully. The interest of USAID’s Philippine Mission and the co-operation of the Philippine government in providing support were also strong considerations in selection.

The 16-month project was designed in co-operation with international consultants and implemented by the Center for Policy and Development Studies (CPDS) at the University of the Philippines at Los Baños through a contract with BRBDP. CPDS maintained a field office in Bicol during the data-collection phases of the project and moved the staff to Manila and Los Baños for the analysis and planning stages.

Indigenous design and implementation of the project, as opposed to implementation by foreign consultants, was important for two reasons. First, although the Bicol had a relatively good data base, much of the crucial information was not expected to be available in the forms needed, and the knowledge and experience of local planners would be essential for designing realistic surveys and interpreting results. Second, the planning process was to be institutionalized in the Bicol River Basin Development Program, requiring that its staff and consultants be intimately involved in the entire study. Project design assistance, technical aid in selecting and adapting methodology, review and evaluation of working papers and the final report, and assistance with training were provided by international consultants, who also monitored and evaluated the project. These consultants were available at regular intervals during the project, but did not reside full-time in the Philippines. Final responsibility for all phases, and for completion of the project, was vested in the Philippine staff.³²

V. PRINCIPLES OF ORGANIZATION AND METHODOLOGY SELECTION

Decisions were made about organization and design of methodology on the basis of specific principles related to the need for using analytical techniques that could be easily applied in rural areas of developing countries. Methodology was adapted both to the characteristics of decision-makers in rural regions where the project was likely to be replicated and to the availability of data in the Bicol River Basin. Some of the principles used to organize the project and select methodologies were inherent in the conceptual framework used to design the project, some were recommended by the international consultants, and others emerged from experience with the project as it progressed. Some specific techniques of analysis had been tested earlier in experimental projects in India, Brazil, and Ghana, and they were included in the methodology devised for Bicol.³³

The project had four distinct phases: first, an extensive inventory was made of data, information, and existing studies to formulate a statistical profile of the region and to delineate existing resources in rural settlements and urbanized centers of the Basin; second, a functional complexity analysis of the region's settlement system was undertaken to determine the distribution of services, facilities, and productive activities and to delineate the settlement "hierarchy"; third, an analysis was made of "linkages" among settlements within the region and with places outside of Bicol; and finally, an analysis was done of the access of the rural poor to services and facilities located in urbanized settlements. The adequacy of the distribution of urban functions for rural development was evaluated and a spatial-policy plan for future development of the Basin was formulated. The plan would then be transformed into recommendations for identification, selection, and location of investment projects designed to increase the access of the poor to urban functions needed for rural development and to strengthen the spatial system for equitable economic development.

Among the operating principles used in the organization of the project and in selection of analytical techniques were the following.

1. Create an ongoing planning process as well as production of a spatial development plan. The objective of the project was twofold: first, "to develop a planning process -potentially valid for application elsewhere in the Philippines and in other countries," and second, to develop "a plan for strengthening the contributions of urban centers to rural development in the Bicol."³⁴ Thus the project would not only test an analytical and planning procedure but also institutionalize the process in the Bicol River Basin Development Program so that the analyses could be revised on a continuing basis.

Although the CPDS staff made extensive efforts to fulfill both objectives -primarily through eliciting the participation of technical personnel, BRBDP planners, and Philippine consultants in the project's operations, and workshop sessions- staff time and attention inevitably focused on analysis. Formulating an ongoing planning process and institutionalizing it were often subordinated to completion of more immediate tasks. Workshops held quarterly in Bicol proved to be an effective way of keeping a core of technical personnel and political leaders informed of activities during the first months of the project, but participation fell off as the project progressed. The pressures of time and conflicting commitments for political leaders made their attendance at workshops sporadic. Once staff activities were moved from Bicol to the University of the Philippines at Los Baños it became more difficult to provide information and elicit participation. Moreover, as pressures began to build on the staff to complete various stages of the project on time, more expedient and less participatory procedures were adopted.

2. Design the spatial analysis and development plan to be policy-oriented and adjunctive in nature. The plan or spatial analysis would be oriented to the decision-making requirements of the Bicol River Basin Development Program, regional offices of national government agencies, and provincial and local governments that would be making investment and location deci-

sions in the Basin over the next ten years. As the regional director of the Department of Local Government and Community Development expressed it during an early organizational workshop, the outputs of the Urban Functions in Rural Development project should be "inputs" for the planning efforts of other organizations. The plan would not be a comprehensive regional development scheme per se, since the National Economic and Development Authority (NEDA), the major cities, and the BRBDP already had comprehensive development plans. Instead, the Urban Functions report would provide a spatial dimension useful for making locational decisions and for revising comprehensive development plans. Planning would be adjunctive, and the data and analysis could be used to supplement technical criteria used by various organizations in making investments in the area.³⁵

3. Use applied research methods and analytical techniques easily performed by rural planners and easily understood by policy-makers. The analytical techniques used in the project would have to be appropriate for applied policy analysis and to the planning capacities found in rural areas. The consultants believed that conditions found in most developing nations imposed tight constraints on the complexity of applied policy analysis. Policy plans must be done quickly and be timely if they are to have an impact on investment decision-making. Thus, policy studies cannot usually depend on time-consuming data collection and highly sophisticated research techniques. They cannot, moreover, use techniques that impose overly complex, costly, or time-consuming requirements on users. They should be relatively easy to apply and not require, at least initially, sophisticated equipment or high levels of technical skill and training, which are not usually found in rural regions. If the methods are to be institutionalized in local planning and decision-making processes they must be of a type that can be applied manually or with easily acquired and operated equipment such as desk calculators. If they are to be applied by planners and administrators without advanced technical

training in spatial analysis, they should involve relatively simple and easily learned operations.

In addition, it was considered crucial that the methods and techniques be comprehensible to rural policy-makers and that the results of the analyses be clearly presented to local and national officials who would have limited exposure to or interest in spatial analysis methodologies, and, indeed, who might be alienated by complex methodology. The primary audience for the analysis would in most cases be government officials and political leaders with limited education and technical training. The analytical techniques most easily understood by them would be descriptive statistics, analytical mapping, scaling, and charting.

Although most participants in the project eventually accepted the general principle, strong tendencies to deviate from it were apparent in the early stages. Some of the staff members (most of whom had masters degrees), the University of the Philippines' professors who acted as consultants, and some of the BRBDP planners often showed more interest in relatively sophisticated methodology and often viewed the project as research rather than as an exercise in applied policy analysis. Staff members worried that the results derived from more simplified descriptive techniques would not carry the "authority" of those generated by sophisticated statistical methods and computer analysis. However, as the project progressed, and the limitations of available data, the requirements of collecting additional information to fit complex analytical methodologies, the difficulties encountered in explaining more sophisticated techniques to political leaders and technical personnel in government agencies, and the constraints on operationalizing computer-based analyses became more apparent, the principle became more acceptable.

4. Use as much existing data as possible; limit new data collection to areas where significant "information gaps" appear.

Because a number of studies had been previously conducted in the Bicol and because the Philippines had extensive census and statistical information, the planning and analysis methodologies were tailored as much as possible to using existing data. Methods requiring additional data collection were used sparingly and only when crucial "information gaps" were identified. In any case, limitations of time and money made large-scale data collection and extensive original research impossible. The Urban Functions study would draw as heavily as possible on census materials, previous resource and social-survey studies of the Basin, and the specialized feasibility and technical studies performed by and for the BRBDP.

Although the Bicol River Basin was relatively "data rich" for an economically depressed region, it soon became obvious that much of the available data were not collected or reported in forms appropriate for spatial analysis. Nearly all socio-economic data, for example, were reported at either the provincial or municipal level and could not be disaggregated to the barangay (village) settlement level. Thus, it was often difficult or impossible to make meaningful distinctions between poblaciones (town centers) and rural barangays with socio-economic data reported at the municipal level. Moreover, much of the data collected by the National Census and Statistics Office (NCSO) were on a sample basis, making it impossible to attribute them to specific settlements or to use original field sheets to disaggregate data for settlements. Some of the data were reported at different units over time, or the unit boundaries changed from one reporting period to the next, making time series or temporal comparisons difficult. A good deal of the information available from technical reports, special BRBDP studies, and national ministries was collected for specific purposes and communities and did not cover the entire Basin. Thus, many aspects of the analysis had to be based on "sample" studies of sub-areas within the Basin.³⁶

Moreover, there were other limitations to the information available. Accurate maps delineating towns and barangays did not

exist when the project began, and a good deal of time had to be devoted to locating and mapping settlements. Air photos were available for only about 10% of the Basin, and neither time nor money was available to complete the photo surveys. Thus, information concerning the location of settlement boundaries had to be collected through field and key informant surveys. The excellent social surveys conducted by the Social Science Research Unit of Ateneo de Naga University -especially municipal and transport inventories and programme evaluation studies- provided strong insights into various aspects of underdevelopment in the Basin, but they covered only Camarines Sur province. Some of the studies had to be updated or extended in Albay Province in order to obtain complete coverage of the Basin. In addition, the lack of family-income and employment data at municipal and barangay levels created serious analytical problems that were never fully overcome. Finally, except for some data found in the transport studies, virtually none of the existing information was useful for linkage analysis; transport linkages, market and social interaction patterns, service linkages, and governmental relationships all had to be determined through original studies done on a sample basis by the project staff of its subcontractors.

5. Use a combination of analytical methodologies, and rely heavily on staff knowledge of the area under study. It became clear early in the project that, given the constraints of time and money and the need to develop a useful policy document quickly, it would not be possible to undertake a comprehensive statistical analysis of the Bicol River Basin. Where comprehensive coverage could not be attained using existing or easily collected data, the staff used partial analysis, sample studies, and sub-area analysis. Formal statistical analysis was supplemented, where appropriate, with "softer" methods: case studies, participant observation, and interviewing of key information. The staff was encouraged to be creative in developing analytical methodologies suited to the conditions and needs of the area. To the extent that the output of the project would be

a policy plan rather than a scholarly research study, the staff was urged to employ a wide variety of techniques for obtaining information, and to cultivate and use their own knowledge of the region in arriving at judgements and conclusions concerning crucial development issues.

Although a large number of possible analytical techniques were suggested in an initial conceptual study, the project was not designed to test a pre-selected set of methods. Design of the analytical methods and techniques evolved during the project as opportunities and constraints became apparent, and was selected on the basis of criteria outlined earlier. Under any conditions, heavy reliance on multi-variate statistical techniques seemed questionable given the types and quality of data available and the purposes of the study.

The staff accepted the necessity of using a variety of formal and informal, "hard" and "soft" analytical methods, and the application of their own judgement to the study, although they were initially sceptical and somewhat uncomfortable without a pre-selected and designed approach. Their initial reaction was that one or two statistical techniques would provide the "answers" and that conventional regional-analysis methods should simply be applied in Bicol. Indeed, in the early stages of the project, statistical methods were often used as "crutches." Manipulation of numbers was substituted for hard thinking and conceptualization about spatial systems in the Basin. To some extent both reactions were mitigated as the project progressed and the staff saw the limitations inherent in each statistical technique they tested, and the need to use methods of analysis as a way of testing conceptions and preliminary judgements rather than to provide unequivocal "answers" and irrefutable conclusions.

In retrospect, it is clear that no pre-selected package of techniques would have exactly fit the conditions in the Basin. Many analytical techniques that were thought to be important for analysis at the outset had to be discarded either because of

lack of available data or because they yielded inappropriate or useless results. Even simple location quotients could not be calculated, for instance, because of the lack of employment or production statistics; coefficients of segregation and Gini Concentration ratios could not be very useful in the context of rural underdevelopment in the Basin. Even some standard techniques of analysis such as centrality indexing were not helpful; attempting to calculate Guttman scales by computer proved futile given limited computer capacity and lack of trained manpower. In each instance, the staff had to fall back on descriptive and manually-calculated statistics. Overall, however, this provided a strong learning experience for most of the staff; doing short field surveys, hand-calculating results, manually constructing scalograms, and testing alternative statistical techniques forced the staff to think seriously about the types of data needed, their real worth, the cost-effectiveness of gathering more, and the meaning of the results in terms of the conditions the observed in the Bicol River Basin.

Moreover, the initial exercise of inventorying existing data prior to designing analytical techniques and collecting additional information -although it required much more time than originally estimated- yielded an important output: the first statistical compendium of social, economic, demographic, and physical information, disaggregated to the municipal level, that had been compiled for the Bicol. It categorized data from myriad sources that heretofore had been scattered in specialized technical reports. This compendium alone would provide an important planning tool for the BRBDP and other government agencies within the Basin, and eventually can be used to assist in making private sector investment and location decisions. Finally the exercise yielded the first comprehensive settlement map of the Bicol River Basin that identified and located barangays. Again, this would provide BRBDP planners with a valuable tool for future planning, and when combined with the analyses of municipalities, functional complexity of settlements, and indicators of linkage, can be used to make more informed and effective location decisions.

VI. ANALYTICAL METHODS AND PLANNING PROCEDURES

The integrated spatial-analysis methodology tested in the Bicol River Basin of the Philippines involved ten major components.³⁷

1. An overall regional resource analysis and socio-economic and demographic profile of the Basin that would serve as a data inventory for planning purposes and as a “baseline” study for monitoring and evaluation.
2. An analysis of the existing spatial structure, describing elements of the settlement system, the functional complexity and centrality of settlements, the hierarchy of central places, and the distribution of, and patterns of association among, functions within the region.
3. Description and analysis of the major socio-economic, organizational, and physical linkages among settlements within the Basin and between them and centers located in other regions of the country.
4. Mapping of information obtained from the functional complexity, settlement hierarchy, and spatial-linkages analyses to determine “areas of influence” or service areas of various settlement categories within the region.
5. Delineation of areas where linkages are weak or non-existent, and of marginal areas that are not served by central places or in which rural populations have poor access to town-based services and facilities that are crucial for rural development.
6. Comparison of information from the regional resources survey, settlement system, and functional distribution analyses to regional development plans and objectives to (a) determine the adequacy of the spatial system to meet development needs and facilitate the implementation of equitable growth policy, and (b) identify major “gaps” in the spatial system, in service areas

for crucial functions, and in linkages among sub-areas of the region.

7. Translation of the spatial analyses into an investment plan that identifies the projects and programmes that will be needed to ameliorate major development problems, to strengthen and articulate the regional spatial structure, and to integrate various levels of settlement within it.
8. Integration of projects identified through spatial and economic analyses into spatially and functionally co-ordinated "investment packages" for different locations within the region, and combination of the investment packages into a priority-ranked and appropriately sequenced investment budget for the development of the region over a given period of time.
9. Creation of an evaluation system for monitoring the implementation of projects and programmes, and for determining the substantive results of development activities on marginal areas and population groups within the region.
10. Institutionalization of the planning procedures in local and regional public agencies charged with investment decision-making and with revising the spatial analysis and development plans at appropriate intervals.

This section of the case study reviews these ten activities in detail, describes the methods of analysis used in the Bicol River Basin, outlines the substantive findings and results of the analyses, and compares the techniques used in Bicol with those tested in similar projects in other developing countries.

An underlying assumption of the spatial analysis in Bicol was that it would be "problem oriented"; that is, the spatial analysis and planning would deal primarily with problems of stimulating growth with equity, and with providing essential information needed to make effective investment decisions. It was assumed that the spatial system

in Bicol should be developed to stimulate "bottom-up" development in rural areas, facilitate the spread of growth from urban centers, increase the access of marginal groups to centrally located services and facilities, and use existing and potentially productive resources in ways that would benefit people living in the Bicol River Basin. The approach to planning would be developmental rather than adaptive, in that it would, as Hermansen describes it, "seek to identify and achieve within a dynamic and historical context a pattern of evolution of the spatial structure that at any point in time is judged to be most efficient from the point of view of promoting a sustained process of rapid economic development."³⁸ Development spatial planning would attempt to create a spatial structure that would act as a catalyst for economic and social progress by transforming traditional organizations and patterns of interaction as development occurred.

Spatial development planning would seek to integrate and locate investments in such a way that they not only stimulate economic growth but also contribute to the evolution of an articulated and integrated spatial system capable of more widely spreading the benefits of growth to all areas of the region. Investments would be selected and located to enhance the capacity of various types of settlements, especially towns and cities, to act as service centers and catalysts of growth for rural development. As Babarovic notes of a similar experiment in regional development planning in Brazil, "location should be such that the accessibility of (urban centers) to the unincorporated rural population as a whole should be as great as possible in the marginated rural group."³⁹ Moreover, it was assumed in the Bicol project, as it was in similar attempts at area development in India, that "an economic system works best and works in an efficient manner when appropriate linkages are established" among settlements of various sizes and that "the location and provision of missing infrastructure is a necessary exercise in regional spatial planning."⁴⁰ But the project's advisers and designers also recognized that articulation and integration of the spatial system alone, although a necessary condition for equitable growth, would not solve the problems of marginality and poverty in economically lagging regions. Other govern-

ment policies, which often allow exploitation of poor regions and subsistence populations, must also be changed so that the “terms of trade” between urban and rural areas, agricultural and industrial sectors, and traditional and modern occupation groups become more equitable.⁴¹

Regional Resource Analysis-Data Inventory and Baseline Study

The Bicol River Basin Urban Functions in Rural Development project began with the preparation of a profile of socio-economic, physical, and demographic characteristics of the region. This analysis of regional resources would serve as an inventory of existing data, contribute to a comparative analysis of the region with other regions in the Philippines, and provide a baseline evaluation of conditions in the Basin at the time the project began.

Data were compiled and then disaggregated to provide a comparative profile of social, economic, physical, institutional, and demographic characteristics of Bicol’s 54 municipalities. Primarily descriptive, this aspect of the study made use of data on population size, density, and composition, levels of dependency, literacy, educational attainment, conditions of dwelling units, size of municipal revenues, land area, crop production, value of production, and experienced work force. Also included were comparative analyses of changes in population sizes of barangays, % distribution of population by municipality, number and % of households with lighting and toilet facilities, strength of construction of dwelling units, distribution of market receipts by municipality, and distribution of agricultural resources. The types, numbers, and distribution of productive and commercial establishments were compared by municipality as were the numbers and capacities of hospitals, educational institutions, and service establishments.

Constraints of time and money allowed little original data collection, which was not a serious problem in the relatively data rich Bicol River Basin. But in other regions or nations without the exten-

sive statistical base of Bicol, more primary data collection would have been required. Integrated spatial analysis of community development blocks (districts of from 60 to 80 villages) in India, for instance, was based on extensive original data collection at the village, household, firm, and shop levels using questionnaires especially designed to determine location-specific information. Village and household questionnaires were administered to every settlement within each block, and samples of households within each village provided detailed information on the location of services and facilities within the area and on socio-economic characteristics of families. Production, distribution, and other economic information was obtained from sample surveys of cottage industries, larger firms, and commercial establishments.⁴² In Bicol, however, these data could be derived from census reports, key informants, ministry studies, and from project-feasibility analyses commissioned by the BRBDP. Most of the data were analysed by descriptive statistical techniques, and significant changes in conditions between 1960 and 1970, and 1970 and 1975, were calculated. Location quotients were derived for some of the economic and social data and others were used to form a quartile ranking of municipalities by relative levels of development.

1. **Location Quotient Analysis.** Location quotients are easily calculated indices of the relative specialization of settlements in specific activities or characteristics. They are especially useful for determining relative industrial or occupational specialization using employment as a surrogate for production. A location quotient is basically a "ratio of ratios" comparing, for example, the ratio of employment in a given industry or occupation in a municipality to employment in all industries in that municipality, to the ratio of employment in that industry in a larger reference area, such as a region, to all industrial employment in that region. The formula is as follows:

$$LQ = \frac{M_i}{M} \cdot \frac{R}{R_i}$$

where M_i = employment in industry i in municipality
 M = total industrial employment in municipality

R_i = employment in industry i in the region

R = total industrial employment in the region

A location quotient greater than unity indicates that the municipality or settlement is more specialized in that activity than the region, and implies that the settlement is performing an “export” activity. A location quotient of less than unity implies that the settlement is less specialized in the activity than the region, and may have to “import” services or goods to satisfy local needs. The occupation quotients for selected municipalities in the Bicol River Basin listed in table 3, for example, indicate that the municipalities of Naga City, Camaligan, Gainza, and Magarao are slightly more specialized in professional, technical, and managerially experienced workers than either the province in which they are located or the Bicol River Basin. Those municipalities that have occupational location quotients at or near unity are sufficiently specialized in those occupations to service local needs at their present levels.⁴³

A variety of socio-economic data can be analysed using the location quotient to determine relative specialization, and location quotients can be calculated to determine relative specializations in the region compared to the entire country. Moreover, a time-series of location quotients can be calculated to show changes in specialization among settlements over a period of time. Location quotients are very rough indicators, however and must be carefully interpreted within the context of regional conditions and refined by the use of other analytical techniques. In Bicol the location quotient was of limited specializations of municipalities because employment data were reported only at the provincial level and could not be disaggregated by municipality.

2. **Quartile Rankings.** The primary use of regional-resource survey information in Bicol was to determine differences in, and levels of development among, municipalities in the region. Municipalities were ranked by level of development based on

three derived analyses: ranking of socio-economic and demographic characteristics associated with levels of development in the Philippines; ranking by share of industrial, commercial, and agricultural production establishments in Bicol; and ranking by transportation access, which was a function of the number of transportation outlets found in the municipality. Quartile rankings were done for selected socio-economic indicators and weighted rank calculations were used to cross-check the results with other analyses in arriving at three development levels of municipalities in the Basin.

3. **Substantive Findings.** The analyses verified that, although the entire Bicol River Basin is predominantly rural, municipalities differ significantly in socio-economic characteristics. The distribution of services, facilities, infrastructure, and productive and social organizations among municipalities is highly skewed (Table 4). If these socio-economic variables are used as indicators of development, municipalities in the Basin can be classified into three major levels.
 - a. **Developing Municipalities** include the six most urbanized, encompassing the two provincial centers of Naga and Camaligan, and Legaspi and Daraga, the city of Iriga and the town of Tabaco. Services, facilities, and productive activities are highly concentrated in these six municipalities, especially in Naga and Legaspi cities. The developing municipalities contain about one-quarter of the population (386,000 people or 22%) but account for more than 40% of the "urban" population; raise 45% of the Basin's municipal revenues; and have significantly higher percentages of households served by piped water and electricity. Most of the Basin's educational and vocational training institutions are concentrated within them as are most of the major health care institutions. The developing municipalities contain nearly a third of all high school and 45% of all college graduates in Bicol. They are the financial centers of the Basin, with

nearly half of all financial institutions and more than 85% of deposit and loan assets. More than one third of all corn mills, agricultural warehouses, farm supply stores and farm machine and tool establishments, and nearly half of the cottage industries and commercial, financial, and service establishments are within their boundaries.

- b. Less Developed or Transitional Municipalities are ten that lie at or near the Manila South Road within the central plain of the river basin. They are closer in socio-economic and physical characteristics to the underdeveloped municipalities than to the developing ones. But they are distinguished from the former primarily by the fact that their access to the Manila South Road or provincial arteries connecting them to the major cities of Naga and Legaspi has generated some diversification of economic and social activities in their poblaciones, and that they contain the potentially richest agricultural land in the Basin. This group of municipalities accounts for slightly more than 26% of the population and has concentrations of services, cottage industries, infrastructure, and facilities slightly larger than its share of the population. Rural areas of these municipalities are largely underdeveloped: less than 20% of households are served by piped water, they have few educational or health institutions, and commercial establishments are rare and scattered. Perhaps because of their physical proximity to the major provincial centers, these areas have not become highly specialized and seem to depend on the larger centers for marketing and trade.
- c. Underdeveloped Municipalities include 38 predominantly rural, subsistence-agriculture areas forming the periphery of the Basin. Slightly more than half of the population of the Bicol River Basin lives in these municipalities, which, by all socio-economic characteristics, are the poorest and least developed. These 38 municipalities

have a far smaller proportion of facilities, services, educated manpower, financial resources, and productive economic activities than their share of population. Their residents are scattered in rather small barangays. Only 8% of households receive water and less than 6% have electrical power. Only five of the 38 municipalities have post-secondary educational or vocational training institutions; nearly 40% have no markets of any kind, and eight contain no financial institutions. These municipalities collect less than two-fifths of all municipal revenues and, on the average, depend on the national government for nearly a third of their municipal income. Some of the municipalities obtain more than half of their revenues from the national government and have few sources of internal income. The financial institutions in these underdeveloped municipalities have less than 10% of the deposit and loan assets in the Basin. As a group, these municipalities contain less than one-quarter of the manufacturing, commercial, financial and service establishments, only a little more than a third of agro-processing, storage and commercial establishments, and one-fourth of the health facilities.

Thus, the analyses revealed that a majority of the population in the Bicol River Basin lives in municipalities with few services or facilities needed to meet basic human needs or to increase agricultural production and expand non-agricultural employment opportunities. Moreover, they are generally isolated from or have extremely poor access to the municipalities in which services, facilities, and markets are most highly concentrated.

Analysis of Centrality, Functional Complexity, and Hierarchy of Settlements

This aspect of the analysis attempted to describe the existing spatial structure in the Bicol River Basin and to delineate the elements of the settlement system, the functional complexity and centrality of settle-

ments, the hierarchy of central places, and the distribution of, and pattern of association among, functions within the region. As noted earlier, increasing the access of rural people to services and facilities located in towns and cities was considered important for incorporating marginal population groups and rural hinterlands into the regional economy. In many marginal areas resources cannot be mobilized and used for development because a spatial structure that facilitates the procurement, transformation, and delivery of those resources is not well-articulated and integrated. In marginal regions of some countries, central places that can support services and facilities requiring large market areas or higher population thresholds are neither numerous enough nor adequately dispersed to provide easy access for the rural poor. In other countries, as Johnson notes, the problem "is not that underdeveloped regions lack central places, for some have too many! What is amiss is that they rarely constitute a functional hierarchy, and for this reason they fail to provide an inter-meshed system of exchange that will provide the requisite incentives for increased application of labor, capital and human skills."⁴⁴ In most marginal regions, the population remains scattered in very small hamlets and villages that are incapable of supporting moderate or high threshold functions, of forming regular, institutionalized markets, or of allowing functional specialization and division of labour. Thus, there is little incentive for people in marginal areas to save and invest, seek productive uses for existing resources, or develop new resources. Opportunities for market expansion and non-agricultural employment are usually minimal.⁴⁵

The objectives of this phase of the analysis in the Bicol River Basin closely approximated those of the integrated spatial analysis undertaken in India, which as Shah points out were:

- a. To study... focal points of growth with ecological settlements coming within their ambit, and to suggest a scheme for the development of a hierarchy of growth centers for an efficient provision of goods and services;

- b. To identify the functional gaps in the physical and institutional infrastructure of these centers and their related settlements and to meet their present and future needs; and,
- c. Recognizing the varying patterns of resource endowments and likely trends and temporal patterns... to plan alternative courses of action for the provision and development of various service facilities.⁴⁶

In the Bicol River Basin, the analysis was used to determine the extent and pattern of centrality, and the distribution, concentration, and ubiquity of services, facilities, and other developmental functions among settlements. The methodology included the following types of analytical techniques.

1. **Functional Complexity Analysis of Municipalities Using the Guttman Scalogram.** In regional analysis, the Guttman scalogram can be used to develop a cumulative scale of functions (items) -such as services, facilities, organizations, and establishments- and to rank settlements (cases) on the basis of the total number of functions located within them. In a perfect scale, each settlement would be expected to possess all functions of those places with lower or equal scores and would not be expected to possess those functions of places ranking higher in the scale. Assuming that a settlement's level of development is reflected in the number and diversity of functions located within it, relative levels of development for all settlements within a region can be determined by the array of scale scores. Combined with other analyses the Guttman scale can be used to group settlements into different levels of a hierarchy or categories of development and to depict relative levels of development within a region by plotting scale scores of each place on a map. Voelkner has used the scale scores, for instance, to classify settlements by degree of "modernization" -ranging from traditional villages with few functions through early transitional, late transitional, early modern, and modern, depending on the diversity and types of functions found within them. Scalogram

analysis also indicates the centrality of settlements, assuming that centrality is the ability of a settlement to provide varied goods and services to less-developed areas.⁴⁷

The Bicol project initially attempted to extend the scalogram of municipalities that had been done earlier for Camarines Sur Province to the rest of the Bicol River Basin.⁴⁸ The analysis by the Social Science Research Unit at Ateneo de Naga University was a typical application of Guttman scaling in regional analysis and clearly illustrates the procedure. First, a survey identified existing institutions, services, facilities and establishments in town centers (poblaciones) of each municipality. The items were coded as being either present or absent and scaled by the Guttman method. A computer programme arranged the towns in a scale, with those having the least number of functions scoring low and those with the most scoring high. The municipalities were then arrayed in a hierarchy of functional complexity and, based on scale scores, were regrouped into scale steps (Table 5). The 30 scale steps were condensed to nine and plotted on a map. Using the condensed steps as indicators of development levels of municipalities, cumulative isopleth lines were drawn around municipalities of equal levels of development (Fig. 4).

The analysis clearly identified Naga City and Iriga as the most functionally complex centers in the province, delineated their apparent "areas of influence," and pinpointed the satellite or supplementary centers within those influence areas. The analysts found a strong correlation between transport access in settlements and their functional complexity, concluding that "accessibility coupled with complexity is a major factor in the evolution of a center" in the Bicol River Basin.

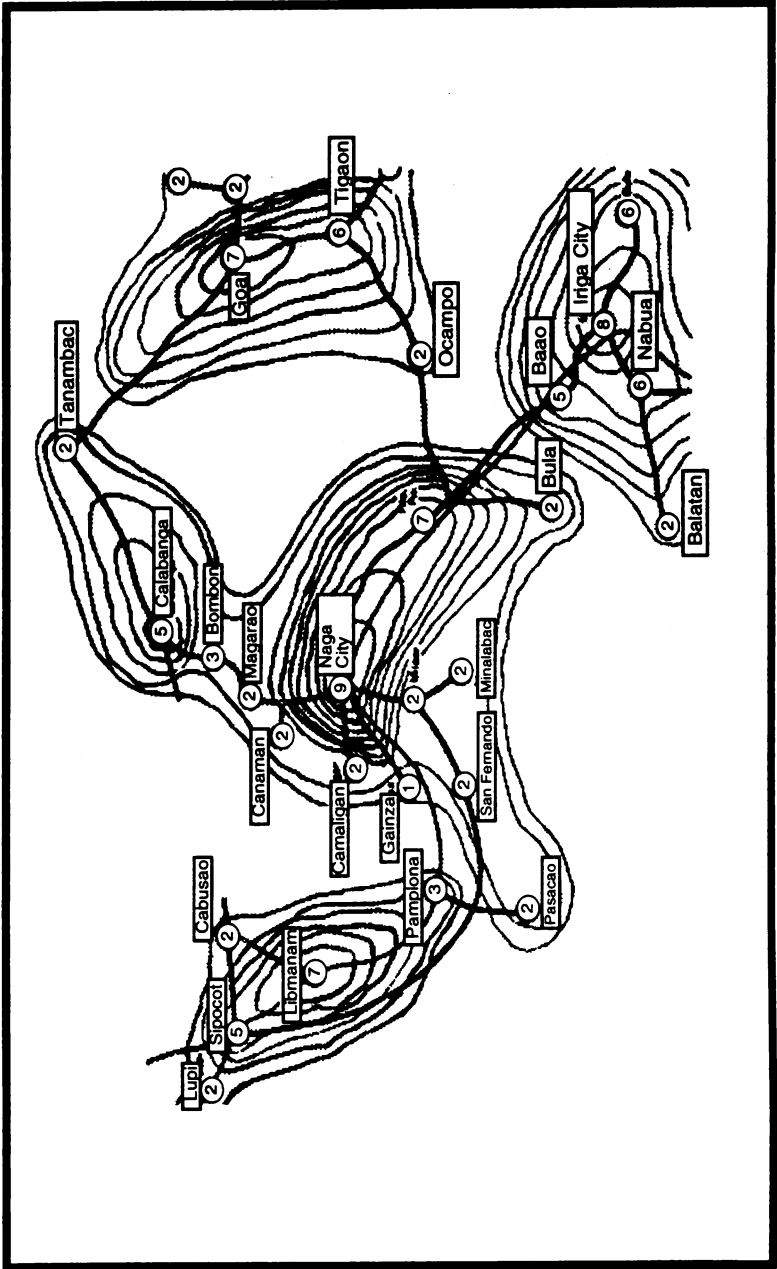
The Urban Functions in Rural Development project sought to extend the methods used in Camarines Sur to all 54 municipalities in the Bicol River Basin, employing 64 functions in eight

Table 5. Guttman Scale of Functional Complexity of Municipalities in Camarines Sur Province, Bicol River Basin, 1975

	Number of functions discriminated in scale	Percentage of functions in municipality relative to number of functions in most "developed" municipality.	N ^o	Condensed
33	Gainza	29	19	1
32	Del Gallego	48	32	2
31	Lupi	53	35	3
30	Tinamac	55	36	4
29	Balatan	55	36	4
28	Minalabac	57	38	5
27	Pasacao	59	39	6
26	Bula	61	40	7
25	Bombom	63	41	8
24	Camaligan	63	4	8
23	Cabusao	65	43	9
22	San Fernando	66	43	10
21	Milaor	66	43	10
20	Ocampo	67	44	11
19	Magarao	68	45	12
18	Canaman	70	46	13
17	Sangay	71	47	14
16	San José	73	48	15
15	Lagonoy	74	49	16
14	Pamplona	81	53	17
13	Ragay	88	58	18
12	Bato	93	61	19
11	Sipocot	96	63	20
10	Calabanga	97	64	21
9	Baao	99	65	22
8	Buhi	104	68	23
7	Tigaon	109	72	24
6	Nabua	111	73	25
5	Libmanan	117	77	26
4	Pili	119	78	27
3	Goa	122	80	28
2	Iriga City	134	88	29
1	Naga City	152	100	30

Source: S. Roco, Jr., and F. Lynch, "Development Levels in Bicol River Basin," SSRU Research Report No. 17, unpublished draft, 1975.

Fig. 4 Isopleth Map of Development Levels of Municipalities in Camarines Sur Province, Bicol River Basin



categories -economic, social services, physical facilities, communications, recreational facilities, personal services, community organizations, and extension and protective services- identified in the SSRU's municipal inventory. The validity of using these items in Albay province was later verified by a sample survey of municipalities in that province.

Although this exercise provided useful information concerning the functional complexity and concentration of various services and facilities in municipalities -and strongly confirmed the findings of the quartile analyses of regional resource data concerning levels of development among municipalities within the Basin- its most important deficiency was that the municipalities in the Philippines are administrative areas and not necessarily discrete settlements. A second scale, of urbanized or "built-up areas," was done to rank settlements by functional complexity and delineate a hierarchy of central places. The built-up areas consist of (a) poblaciones and contiguous barangays with approximately the same land use characteristics as the población, and (b) other barangays within the municipality with a population size of at least 50% of the población.

Neither the municipal nor built-up area scales, however, distinguished barangays as discrete settlements. Indeed during the surveys it became clear that many barangays, like municipalities, were only administrative areas rather than discrete settlements. And since accurate boundaries for many barangays could not be determined, population density criteria had to be eliminated. It was decided, instead, to test the census definition of settlements: poblaciones and other barrios with a population of at least 1,000 in which the occupation of the inhabitants is predominantly non-farming/fishing and which have specified physical characteristics.⁴⁹ All barangays not meeting these minimum population-physical facilities criteria were considered to be non-central places and would be treated as a group at the lowest order in a hierarchy of functional complexity. A survey was later done of all barangays, which confirmed

the validity of this judgement. To get a better indication of the hierarchy and functional complexity of settlements, the staff turned to other methodologies, including a manual version of the Guttman scale for all barrios in Bicol.

2. **Manual Scalogram Analysis of Settlements.** The manual version of the Guttman scale is primarily a graphic and non-statistical device that arrays functions by ubiquity (frequency of presence) and ranks settlements by functional complexity on a matrix chart. The Guttman scales calculated by a computer programme presented two major problems for analysis in the Bicol River Basin. First, the functions that seemed to be of most interest for rural development -farm-equipment repair shops, vocational schools, credit unions, rural banks, farm supply stores, etc.- did not scale and were eliminated from the scale scores by the computer. Second, the computer output was difficult to understand and could not be easily presented to show the distribution of functions by place. The computer version required detailed explanation and interpretation, which technically untrained policy-makers -at least those attending the Bicol technical workshops in which the method had been presented- found difficult to understand. Nor did they immediately see its relevance.

A graphic scale used successfully in India and Indonesia was adapted for the Bicol study. All settlements were included -a total of 1,419 built-up areas and barangays. The technique resulted in a graphic presentation illustrated in figure 5.⁵⁰ Both data collection and calculation requirements for constructing a scalogram area minimal. They include:

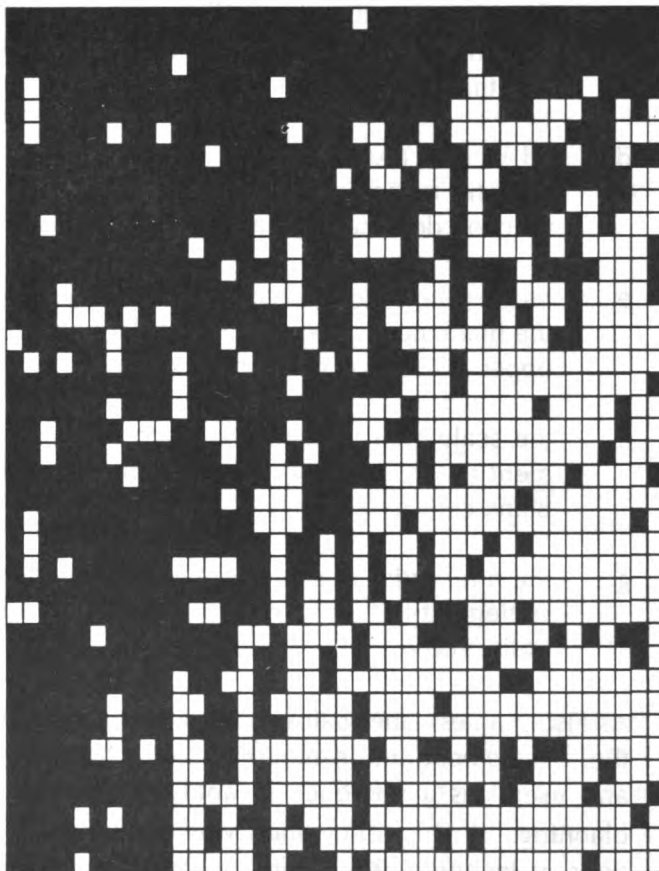
- a. a list of all settlements in the area under study (hamlets, villages, market towns, small cities, larger urban centers);
- b. population size of all settlements in the area or region;
- c. a map pinpointing the location of all settlements in the study area; and

FUNCTION PRESENT
 FUNCTION ABSENT

- FUNCTION**
- AGRO-PROCESSING FACILITY
 - FARMERS ASSOCIATION
 - COTTAGE INDUSTRY
 - CIVIC ORGANIZATION
 - PAVED BASKETBALL COURT
 - HIGH SCHOOL
 - SPORTS ASSOCIATION
 - AG. EXTENSION STATION
 - LOCAL GOVT. MINISTRY OFFICE
 - BPI EXTENSION STATION
 - PIPED WATER SUPPLY SYSTEM
 - PRIVATE MEDICAL CLINIC
 - RURAL BANK
 - FARM SUPPLY AND AG-CHEM STORE
 - PUBLIC MARKET (REGULAR)
 - AUTO REPAIR SHOP
 - PROFESSIONAL ORGANIZATION
 - PLAYGROUND WITH FACILITIES
 - CONSTRUCTION SUPPLY STORE
 - DRUGSTORE
 - HARDWARE STORE
 - FARM EQUIP. REPAIR FACILITY
 - CREDIT UNION
 - SURVEYOR
 - RESTAURANT
 - CO-OPERATIVE
 - HOUSING SUBDIVISION
 - APPLIANCE STORE
 - PC (CONSTABULARY) STATION
 - TRAIN STATION
 - VOCATIONAL STORE
 - PRIVATE HOSPITAL
 - TELECOMMUNICATIONS STATION
 - LODGING PLACE
 - OPTOMETRY/OPTICAL SHOP
 - POWER PLANT OR STATION
 - FUNERAL PARLOUR
 - NIGHT CLUB OR BAR
 - BANK OR FINANCIAL ESTABLISHMENT
 - BUS STATION WITH REPAIR FACILITIES

SETTLEMENT POPULATION

Legaspi / Daraga	92.4
Naga / Camaligan	67.4
Iriga	45.9
Tabaco (pop.)	13.9
Goa (pop.)	7.1
Tigson (pop.)	2.9
Pili (pop.)	5.9
Nabua (pop.)	7.8
Beao (pop.)	8.8
Sipocot (pop.)	6.8
Guinobatan (pop.)	1.1
Libmanan (pop.)	5.5
Carating (pop.)	3.2
Oas (pop.)	12.8
Tinambac (pop.)	3.9
Legazpi (pop.)	4.5
Thi (pop.)	2.0
Calabanga (pop.)	9.1
Pio Duran (pop.)	7.1
Ragay (pop.)	2.7
Buhi (pop.)	9.8
Ocampo (pop.)	2.1
Pasacao (pop.)	4.4
Sto. Domingo (pop.)	5.8
Del Gallego (pop.)	1.9
Caramoran (pop.)	3.9
Malinao (pop.)	2.4
Canaman (pop.)	4.0
Libon (pop.)	6.8
Bato (pop.)	9.5
San José (pop.)	3.3
Bombon (pop.)	2.8
San José-Bun	2.2
Potangui (pop.)	5.1
Balatan (pop.)	4.8
Milnor (pop.)	5.4
San Fernando	3.3
Guinza (pop.)	1.4



- d. an inventory showing the presence or absence of functions (services, organizations, facilities, establishments, or other activities) in each settlement.

The procedure for manually constructing a scalogram is as follows.

- a. On the left side of a worksheet, list settlements as rows in descending order of their population;
- b. across the top of the worksheet, list the functions found in the region in their descending order of ubiquity (frequency of presence);
- c. draw row and column lines so that the worksheet becomes a matrix in which each cell represents a function that may appear in the settlement;
- d. fill in with a dark colour all cells in which a function is actually found in a settlement, leave cells for which a function does not appear in a settlement blank;
- e. reorder the rows and columns so as to visually minimize the blank cells appearing in the dark pattern found in the upper left section of the matrix;
- f. the scalogram is complete when no shifting of a settlement row or function column can reduce the number of blank cells in this pattern;
- g. the final order of settlement rows identifies a ranking of settlements which can be interpreted as an ordinal centrality score.

As Fisher notes, "the scalogram provides a visual description of the... settlement and institutional hierarchy that is easy to read and useful as a reference in analyzing numerous issues for planning."⁵¹ This observation was confirmed in the presentations at technical workshops, where both technically-trained

personnel and local political leaders examined an initial version of the scalogram prepared for the 120 settlements at the "top" of the hierarchy. Moreover, a Voelkner observes of the application of scalogram analysis in Thailand, the Philippines, and Sri Lanka, it can "systematically process and measure qualitative data which previously permitted only intuitive analysis."⁵² It can also process quantitative data that are error-prone or not statistically reliable by using only their qualitative content, for which the error margin is low, and can serve as a substitute for quantitative analysis when reliable statistical data cannot be collected quickly or economically.

Among the potential uses of the scalogram in regional planning are the following:

- a. It can be used to categorize settlements into levels of functional complexity and determine the types and diversity of services and facilities located in central places at various levels of a hierarchy.
- b. The scalogram shows rough associations among services and facilities in specific locations and potential linkages among them.
- c. The scalogram indicates the sequence in which settlements accumulate functions and the implications for sequencing complementary or catalytical investments.
- d. By reading any column the ubiquity of a service or facility, and its distribution among settlements, can be easily seen.
- e. The array of items in the scalogram, analysed in conjunction with a map showing locations of functions and their distribution and with population-service criteria, can be used to make determinations about the adequacy of services and facilities in the region.

- f. "Missing" or unexpectedly absent functions are clearly identified and investigations can be made into the reason that settlements at that scale level do not have the services or facilities, and decisions can be taken about the appropriateness of investing in those functions.
- g. Unexpectedly present functions are also identified, and the reason for the appearance of services and facilities in those settlements can be determined.
- h. Rough indicators of population threshold size needed to support various services and facilities can be determined from scalograms that show the population sizes of settlements in which functions currently appear.
- i. The scalogram can be used to make decisions about appropriate "packages" of investments for settlements at different levels in the spatial hierarchy.

Thus, a manual scalogram has definite advantages over the computerized Guttman scale for application by rural planners, since it is easy to construct and interpret, requires no sophisticated training or equipment, and can be easily updated and revised using either "windshield surveys" or good aerial photography. More systematic reporting schemes can be designed to obtain information about changes in services and facilities in settlements of a region, as has been done in the village headman surveys in Thailand.⁵³

- 3. **Threshold Analysis.** In order to obtain better approximations of the population sizes required to support existing services and facilities in the Bicol, the staff adapted Marshall's approach to threshold analysis.⁵⁴ Marshall argues that "the threshold is that size of center which divides the ranked list of centers in such a way that the number of centers lacking the function above the division is equal to the number of centers possessing the function below the division." The method is especially appropriate

to analysis of rural regions and to the type of data already collected for scalogram analysis, in that it requires only a ranked listing of settlements and the presence or absence of functions. Marshall suggests a modification on the general rule: "Once a threshold has been determined, this threshold (and the function to which it applies), will subsequently be disregarded unless at least half of all the centers above the threshold size possess the function in question."

The staff adopted the procedure which is illustrated in table 6.

- a. Construct a table with a rank listing of centers according to population, a corresponding list of population data and the presence (1) or absence (0) of every function in each of the centers listed;
- b. apply Marshall's rule and identify each function's population threshold; and
- c. apply Marshall's supplementary rule and disregard functions eliminated by this process.⁵⁵

Table 6. Calculation of Threshold Levels for Central Place Functions

Central places in descending order of rank	Population Size	Function		
		1	2	3
A	10.000	1	1	1
B	8.000	0	1	1
C	6.000	0	1	1
D	5.500	0	0	1
E	3.000	0	0	1
F	2.700	1	1	0

There were, however, definite limitations on the use of this technique. Current threshold levels may not realistically represent the potential for settlements of various sizes to support services and facilities, and may reflect locational decisions not based on market considerations. They also fail to reflect development obstacles that may have prevented services and facilities from being efficiently located in settlements that do have the required population sizes to support them. The technique does offer a "quick and dirty" means of calculating the thresholds for currently available services and facilities, however, and was used in conjunction with other methods of estimation.

4. **Weighted Centrality Indexing for all Settlements.** Another complementary exercise to obtain an indication of centrality was the calculation of weighted centrality indices for all settlements. The staff devised a method of adapting Marshall's centrality index, assigning weights on the basis of ubiquity of functions. The procedure is as follows.

- a. Reproduce the largest Guttman scale in an inverted form with cases arranged vertically and items horizontally;
- b. total each row and column;
- c. using the assumption that the total number of functional attributes in the entire system has a combined centrality value of 100, determine the weight or "location coefficient" of the functional attribute by applying the formula:

$$C = t/T$$

where C = the weight of functional attribute t

t = combined centrality value of 100

T = total number of attributes in the system;

- d. add one block to the table and enter the weights computed;
- e. reproduce another table similar to that in step 1 displaying the weights calculated in step 3 and the total centrality values; then

- f. sum the weights of each row to produce the indices of centrality.56

Tables 7 and 8 illustrate the calculation of the centrality index. The centrality index allowed use of attributes or functions that appear as "errors" in the Guttman scale, based on the assumption that the presence of "rare" functions in an otherwise lower scale centre does contribute to its centrality.

- 5. Substantive Results of Functional Complexity Analyses. The functional complexity and scale analyses showed quite clearly that the Bicol River Basin is a sub-region in which services and facilities necessary for fulfilling basic human needs and generating economic development for the rural poor are not only inadequate but also highly concentrated in a few small central places, which are not easily accessible to people living outside of their immediate boundaries. The hierarchical distribution of settlements is strongly skewed and the spatial system is neither well articulated nor tightly integrated. Of the 1,419 discrete settlements located in the basin -120 built-up areas and more than 1,200 barangays- little more than half contained any of the 64 functions. Nearly 90 % of all functions appeared in less than 20% of the settlements. Most of the other functions that appear in more than 20% of the settlements are either highly localized services or social organizations with little or no productive capacity. And even among the built-up areas functions are unevenly distributed. Nearly 60% of all central functions appear in less than 20% of the built-up areas, with one-fifth of these places containing no functions at all (Table 9).

Only two central places -the Naga-Camaligan and Legaspi-Daraga urban areas- contained most of the functions found in the Basin's settlements. These two places represent less than one % of all communities and contain about 10% of the Bicol's population (Table10). At a second level are 11 settlements which as a group seem to function as local service centers with from 31 to 54 functions. These centers perform a few area-wide and a larger number of local, commercial and

Table 7. Calculating Weights of Function

FUNCTIONS											
Places	1	2	3	4	5	6	7	8	9	10	Total
A											10
B	1	1	1	1	1	1	1	1	1	1	8
C	1	1	1	1	1	1	1	0	1	0	6
D	1	1	1	1	1	1	0	0	0	0	7
E	1	1	1	1	1	1	0	1	0	0	5
F	1	1	1	1	1	0	0	0	0	0	4
G	1	1	1	1	0	0	0	0	0	0	3
H	1	1	1	0	0	0	0	0	0	0	3
	1	1	1	0	0	0	0	0	0	0	
Total Functions	8	8	8	6	5	4	2	2	2	1	
Total Centrality	100	100	100	100	100	100	100	100	100	100	
Weights	12.5	12.5	12.5	16.5	20.0	25.0	50.0	50.0	50.0	100	

Table 8. Calculating Centrality Indices

FUNCTIONS											
Places	1	2	3	4	5	6	7	8	9	10	Total
A	12.5	12.5	12.5	16.6	20.0	25.0	50.0	50.0	50.0	100	349.1
B	12.5	12.5	12.5	16.6	20.0	25.0	50.0		50.0		199.1
C	12.5	12.5	12.5	16.6	20.0	25.0					99.1
D	12.5	12.5	12.5	16.6	20.0	25.0		50.0			149.1
E	12.5	12.5	12.5	16.6	20.0						74.1
F	12.5	12.5	12.5	16.6							54.1
G	12.5	12.5	12.5								37.5
H	12.5	12.5	12.5								37.5
Total centrality	100	100	100	100	100	100	100	100	100	100	1000*

* Total does not add due to rounding

Table 9. Distribution of Functions Among Settlements in Bicol River Basin, 1977

Range of settlements with functions	# Functions	Type of functions (per cent of settlements with function)
80-100%	0	
60-79%	0	
40-59%	1	Agro-processing facility (41.1)
20-39%	3	Farmer's association (38.9) Cottage industry (26.7) Civic organization (26.7)
10-19%	3	Sports association (13.6) Paved basketball court (13.5) Piped water supply (12.5)
5-9.9%	2	High school (7.8) Agricultural extension station (6.1)
2-4.9%	18	Photo studio (4.8) Professional organization (4.1) Plant industries extension office (4.3) Private medical clinic (3.8) Farm supply/agro-chemical store (3.4) Regular public market (3.2) Farm equipment repair shop (3.4) Rural bank (2.8) Labour union (2.3) Ministry of Local Government Office (4.1) Animal industries extension office (3.9) Auto-repair shop (4.1) Cockfighting pit (3.6) Construction supply store (3.4) Hardware supply store (3.1) Playground with facilities (2.9) Housing subdivision (2.8) Co-operative organization (2.2)
1-1.9%	19	Drugstore (1.8) Restaurant (1.8) Credit union (1.8) Train station (1.7) Appliance store (1.6) Bus station with repair facilities (1.5) Lodging place (1.3) Telecommunications station (1.1) College (1.1) Funeral parlour (1.0) Police constabulary station (1.8) Nightclub or bar (1.7) Surveyor (1.7) Gymnasium/auditorium (1.6) Private hospital (1.5) Vocational school (1.3) Power plant or station (1.2) Bank or financial establishment (1.1) Optometry/ optical shop (1.1)
Less than 1.0%	18	Telephone exchange (0.9) Cinema with daily run (0.8) Operational government hospital (0.7) Shopping centre (0.6) Cemetery (0.6) Radio station (0.4) Newspaper publisher (0.2) Red Cross office (0.2) Airport (0.1) Photocopy service (0.9) Paluwagen (welfare society) (0.7) Fire station with trucks (0.7) Cinema with less than daily run (0.7) Port or pier (0.5) Nursing school (0.4) Security agency (0.3) Hotel (0.3) Bowling alley (0.2)

Table 10. Functional Complexity of levels of Settlements in Bicol River Basin, 1977

Level of hierarchy	Functional Characteristics	Number of settlements	Settlements	Range of functions	Per cent of all settlements	Per cent of basin population	Average population size
I	Provincial service centres	2	Naga-Camailigan Lagaspi-Daraga	60-61	0.14	10.6	89,892
II	Local service centres	11	Iriga, Tabaco, Goa, Tigaon, Pili, Nabua, Baao, Guinobatan, Libmanan, Ligao	31-54	0.77	7.3	11,107
III	Rural service centres	43	37 poblaciones 6 barangays	10-28	3.03	10.5	4,196
IV	Non-central places	1,363	2 poblaciones 1,361 barangays	0-9	96.06	71.6	922

administrative functions. Most are clustered along the national highway or at a junction of provincial roads. A third level of about 43 settlements, representing 3% of all communities and about 10% of the Basin's population, act as small rural service centers, in which from 10 to 28 functions appear. But most of these are highly localized activities accessible only to people living in the immediate vicinity of the barrio. The overwhelming majority of settlements -over 1,300 or about 96% of the total- are residential non-central places. They are villages of a few hundred families engaged in subsistence or near-subsistence agriculture or working as tenants or on small family-owned plots. All communities in this category have fewer than nine functions; most contain only a few or none at all. The only activities consistently found in these barrios are ubiquitous local functions serving a neighbourhood or cluster of houses. Most of the settlements have populations smaller than is necessary to support most functions found in the Basin.

Analysis of Linkages Among Settlements in the Region

The conceptual study on which the Bicol River Basin Urban Functions in Rural Development project was based contended that neither the goals of increased productivity and income expansion in rural areas nor those of achieving greater equity in income distribution can be attained in developing nations without increasing the interaction among components of the spatial system. The integration of villages, market towns, intermediate cities, and metropolitan areas, and the incorporation of rural areas into the national spatial system, can transform rural regions and accelerate national development.⁵⁷

Two basic observations were made of developing countries where spatial articulation had occurred. First, an increase in the number and diversity of linkages among central places and the growth or transformation of those places were inextricably related. In some cases new linkages, such as the extension of roads, river transport, or rail connections, promoted growth and diversification of existing

centers or generated new towns and cities. In others the appearance of new productive activities promoted new or strengthened linkages between the places in which those activities appeared and other points in the spatial system. That is, some linkages promoted accelerated growth of villages, market towns, and intermediate size cities, and others were the result of nodal growth. To distinguish cause-and-effect relationships, however, was often extremely difficult because nodal and linkage growth may take place simultaneously or in rapid succession. Second, the variety of linkages that integrate urban and rural areas into an articulated spatial system are themselves inextricably linked. Creation of one new linkage may produce a "cascade effect," making other activities and forms of interaction possible, and promoting the growth of existing or new central places. Once a new set of linkages is introduced into a rural market system, for instance, it can trigger a set of "circular and cumulative changes" toward further growth and change. Simply improving transportation linkages among villages leads to reorganization and expansion of existing periodic markets. Displacement of weak or unsuccessful markets and redistribution of trade can create entirely new markets and increase the demands on the transport system.⁵⁸ New urban-rural physical linkages can change the flow of economic resources, the spatial pattern of social and economic interaction, and the movement of people. Closer interaction among villages, market towns, intermediate cities, and major metropolitan centers can make it less expensive and more convenient to integrate technology among levels of the spatial hierarchy and to distribute more widely the services that fundamentally transform economic structure and increase standards of living within rural areas. Among the types of linkages that should be examined in developing regions are the following:

- a. Physical linkages such as road networks, river and water transportation channels, rail networks, and systems of ecological interdependency.
- b. Economic linkages reflected in market patters, raw material and intermediate goods flows, and capital or trade flows; production linkages among industries located within the region,

and consumption and shopping patters; income flows and sectoral and inter-regional commodity flows.

- c. Population movement linkages, including permanent and temporary migration patterns and journey-to-work patterns, traffic flows and other forms of temporary population flow.
- d. Technological linkages as reflected in telecommunications, energy, or irrigation networks.
- e. Social interaction linkages reflected in visiting patterns, kinship patterns, tribal or social group interaction, marriage areas, and others.
- f. Service delivery linkages for credit and financial institutions, educational, training, or institutional services, health service delivery, and transport service systems.
- g. Political, administrative, and organizational linkages as represented in governmental structural relations among different levels, governmental budgetary flows, formal and informal decision-making procedures, and inter-jurisdictional transaction patterns.

The analysis of linkages in Bicol remained partial and descriptive because of the large amount of original data that would have had to be collected in order to do a complete mapping of physical, social, and economic linkages in the Basin. Yet, through sample surveys and synthesis of socio-economic studies already done in the Basin, the staff made substantial progress in obtaining information that provided useful insights into how activities located in various settlements are related to each other, and into the interaction patterns among settlements within the Basin.

The studies showed that the adverse effects on the rural poor of Bicol's highly skewed distribution of services and facilities are exacerbated by extremely weak economic, physical, service, and social linkages among settlements. Although some of the functions included

in the scale could not be expected to be widely distributed -they are central functions requiring high population thresholds- most were basic commercial, administrative, or service functions essential to meeting human needs and accelerating rural development. If they are not widely distributed in settlements throughout the Basin, then equity criteria would suggest that those living in rural areas should at least have physical access to places where they are located. But central places within Bicol are not easily accessible to most rural areas, and the urban and rural settlements are not strongly linked.

1. **Transportation and Physical Linkages.** The staff compiled information on transportation linkages among sub-areas of the Basin by mode, on road networks by conditions of road, and interpoint distances among barangays and between barangays and poblaciones. In addition, information on traffic volumes, means of transportation, and selected commodity flows was made available through various transportation studies conducted by BRBDP. The staff contracted for a survey of "informal" transport of goods and passengers by railroad "skates." Many of the data were mapped and provided a detailed profile of physical linkages among sub-areas within the Basin.

Transport studies showed that more than 70% of all roads in the Basin are of poor quality and need upgrading. Only the national highway cutting through the centre of the Basin, and a few provincial roads, are of all-weather construction and passable during the rainy season. Farm-to-market roads are few and of poor construction. Many rural barrios can only be reached by small boat or on foot. The inadequacy of regular transport linkages is reflected in part by the use of non-motorized vehicles, animal-drawn wagons, use of illegal "skates" along the railroad tracks, and small boats and barges, and in part by the fact that the majority of trips taken within the Bicol River Basin are on foot. The railroad provides limited service to points outside the Basin and the major centers are linked to Manila only by infrequent bus and air service.

Roads are used by 95% of the passengers taking trips within the Bicol River Basin and to transport over 80% of agricultural commodities. But as physical linkages among communities, the roads provide rather poor service. Most of the rural population lives in settlements not easily accessible by road, and transport is difficult and expensive in most of the Basin. The cost of transporting commodities in interior rural areas is up to six times more than in areas connected by roads passable by motorized vehicles. Farmers from rural areas must often walk for hours to the nearest road and carry their produce on their backs or on slow-moving carabao or horses. Even after they reach a provincial road, the waiting times for a jeepney or bus are long and the costs so high that marginal profits are sometimes completely wiped out. Rural farmers must wait an average of 30 times longer for transportation at secondary roads than at places adjacent to the Manila South Road and in some more remote sections of the Basin they may wait as long as three or four hours. Because of the cost of transportation and difficulty of travelling, 85% of all trips taken within the Basin are among places within the same municipality and 99% are within the same province. Relatively little travel -for shopping, work, trade, social interaction, or any other purpose- takes place among municipalities and there is little interaction on a regular basis between the Basin's two provinces.

2. **Economic and Market Linkages.** The staff completed surveys of six regular and six periodic markets to determine the origin and destination of selected commodities through major markets, to estimate the physical "reach" of marketing centers for those commodities, and to identify spatial and functional linkages among producers, middlemen, and buyers. Although the sample surveys were not an adequate substitute for a complete market study they did provide indications of linkage and raised important questions for further marketing research. In each of the six major markets 100 middlemen and 50 producers were interviewed with prepared questionnaires. Information was

obtained on source and destination of commodities, type of seller, place of sale, and volume of trading. Similar information was garnered from periodic market middlemen. The survey was limited to public markets and did not include private stalls located adjacent to public markets.

Information on each commodity's source, destination, and mode of transport was mapped, showing linkages among places within the Basin and between market centers within Bicol and those outside. The studies clearly demonstrated that market linkages, which should form a major network of commercial interaction within and among rural areas, are extremely weak in Bicol. The greatest amount of market interaction occurs through central markets in Naga and Legaspi cities. But a significant portion of the Basin's population lives in settlements too small to support even a periodic market, which adversely affects their ability to sell agricultural surpluses, raise their income levels, obtain household goods, or buy inputs needed to increase agricultural output.

Analysis of the commodity flows indicates that markets within the Bicol River Basin are primarily local exchange centers serving residents of the places in which they are located; that they have limited "reach" or service areas and are not well integrated into a network of area-wide exchange and trade. The survey indicated that a "nested" hierarchy or articulated network of markets, characteristic of more economically developed regions, does not exist in Bicol. Markets within the Basin are primarily undifferentiated agricultural exchange points trading almost exclusively in six commodities (rice and palay, coconut, copra, fresh and dried fish, poultry, and livestock) with some larger regular markets also providing limited amounts of household goods. Bicol River Basin markets, even in larger towns, have insignificant external trade linkages and the periodic markets are generally isolated, highly localized, and virtually unintegrated collection and exchange points, most of which are barely accessible to rural people beyond 10 or 15 kilometres from the village in which the market is located.

3. **Social Linkages.** To the extent that the integration of settlements within a region occurs through social interaction among residents -through kinship ties, visiting among kin and friends, inter-village marriages, and for recreation and ritual- social linkages reflect the degree to which people perceive of a region as a coherent and unified unit of society. Surveys of selected social interactions show relatively little linkage among settlements within sub-areas of the Bicol River Basin. A sample survey of marriage records revealed that an average of less than 19% of all spouses were chosen from outside the same municipality during a three-year period in the mid-1970's. Over 80% of all men and women in Bicol, during that period, tended to choose spouses from within their own municipality, and in most cases from within the same or a neighbouring barangay. Since social interaction patterns in the Philippines are shaped strongly by family visiting, marriages among people from different towns and municipalities would be expected to increase social interaction among those places. But the inter-modal transport studies confirm the indications of marriage-pattern studies, that relatively few inter-municipal trips are for social purposes.

4. **Administrative, Political, and Service Linkages.** The nature of relationships among levels of government within the Bicol, including formal and informal political and administrative decision-making, the linkages among and between government units in the provision of services and facilities, and the characteristics of the network of planning organizations affecting development policy within the Basin were some aspects of administrative, political, and governmental linkages explored in a study subcontracted to the College of Public

Administration at the University of the Philippines.

It was found that formal government linkages among levels are dominated by national ministries operating within the Basin, and that formal structure is highly centralized. Most local officials are appointed by and

responsible to national ministries. Municipal officials generally are not under the authority of the mayors, themselves hold-over appointees under martial law, who have few resources to solve local problems. Most municipalities in the Basin are dependent on the national government for part of their revenues and most of their authority. Decisions are often made through highly personalized relationships.

Studies of government structure and services in Bicol indicated that services provided by all levels are highly localized. Health, education, and other public institutions generally extend services only to populations living in the immediate vicinity of their sites or to the few who can afford to travel from rural barangays to obtain them in the larger cities. Even the post-secondary schools in the larger centers primarily serve only the local area. Health, education, and agricultural extension services are far below standards set by national ministries.

Analytical Mapping of Functional Complexity and Linkage Data

Information about levels of development and accessibility of centers is mapped in conjunction with analyses of the functional complexity and linkages of settlements in order to determine the "areas of influence" for each type of settlement, determine where linkages are weak, and locate peripheral areas that are not served by central places or in which rural populations have poor access to urban functions.

The Bicol River Basin project produced a number of analytical maps that showed the distribution and concentration of essential functions, the centers linked by various forms of interaction, and rural hinterlands that remained marginal and unintegrated. Transport and physical accessibility maps showed areas of the Basin that can be reached by roads, water transport, and railway. The volumes of goods flowing through major markets were mapped to show the "reach" of each market centre and the sources and destination of commodities traded. The maps delineated the secondary and periodic markets in rural areas that participated in trade relationships with larger markets. Travel volume and origin and destination data were

derived from the modal transport study and were mapped along with the service areas of selected institutions and public facilities. The project staff made a number of transparent overlays that could be used with a base map of the settlement system to show the distribution of services and facilities and that could be employed in baseline comparison and evaluation after development plans were implemented. They also produced the first comprehensive map of barangay settlements in the Bicol River Basin, itself a tool that would be important in future development planning.

Delineation of Unserved and Marginal Areas

Judgements about marginal or unserved areas can be made on the basis of scalogram, linkage, and baseline studies in conjunction with the isopleth and functional distribution maps, as was done in the Bicol River Basin. This requires intimate knowledge of the region under study and depends on the staff's ability to draw conclusions from a variety of different analyses, none of which alone will identify marginal areas or population groups with poor access to town-based functions.

More complex statistical techniques have been used in regional planning to identify the "optimal" locations of growth centers or service centers aimed at overcoming rural marginality. Babarovic used a variation of the population-potential model in Brazil to measure the potential accessibility of different urban centers within the national urban system to the incorporable rural population.⁵⁹ The optimum locations of new growth poles or secondary growth centers would be those urban places that have the highest potential for incorporating rural population. The analysis assumed that at any given urban centre *j*, the rural population "accessible" to the impact of a new growth pole would be limited to some extent by: "a) the intensity of the impact exercised by the existing urban system on point *j*; and b) the permeability of the rural population surrounding point *j* to the urban impact (attraction/diffusion)."⁶⁰

Attempts were made to calculate the urban potential of urban centre *j* in relation to the total population of the urban system by using a

variation of the potential model with per capita income of each urban centre as the weighting coefficient:

$$V_j = \frac{\sum_{i=1}^n r_i \cdot U_i}{(d_{ij})^a}$$

where: r_i = income coefficient of urban centre i

U_i = urban population of urban centre i

$r_i \cdot U_i$ = weighted population of centre i

d_{ij} = distance between urban centre j and other urban centers i

a = empirically derived exponent indicating the degree to which distance adversely affects the potential.

It would thus be expected that V_j would be high for large urbanized centers and low for peripheral towns and small cities.

Babarovic calculated V_j for 112 urban centers in Brazil and standardized the values on a scale of 0 to 100, assigning an index of urban exposure, E_i , to each centre to show its relative degree of "exposure" to the urban system. He then calculated a "coefficient of rural incorporation," a measure of the rural population that can be expected to be influenced by exposure to the urban system. The "coefficient of rural incorporation" is calculated by combining the items E_i and a coefficient of "rural permeability" m_i , the values of which must be established from knowledge of the susceptibility of rural population to the influence of urban centers. The coefficient m_i ranges from 0 to 1, where 0 represents total impermeability based on long distance and lack of linkages, and 1 is total permeability for populations living close to the centre and having strong linkages to it. The coefficient of rural accessibility is expressed as:

$$a_i = \frac{m_i \cdot E_i}{100}$$

After the values for m_i , E_i , and a_i are calculated, they can be used to determine, statistically, that part of regional rural population, R_i ,

that can be expected to be incorporated or influenced by exposure to an urban centre i , through the expression:

$$R'_i = a_i \cdot R_i = \frac{E_i}{100} \cdot R_i$$

he part of the rural population that will be influenced by the centre will either migrate to it or be incorporated locally by participating in productive activities for which the urban centre will create demand. This latter part of the rural population will not be affected by the creation of a growth centre and is excluded from the calculation of the potential incorporable rural mass index.

Babarovic suggested designating those urban places as growth centers where there is maximum "accessibility to the total incorporable rural mass," measured by the potential incorporable rural mass index, W_k , for urban centre k :

$$W_k = \sum_{i=1}^n b_i \cdot R_i = \sum_{i=1}^n \frac{m_i (1 - E_i) R_i}{(d_i k)^a}$$

$$E_i$$

The expression $b_i = m_i (1 - \frac{E_i}{100})$ is a "coefficient of incorporability" of the rural population remaining marginal in the vicinity of an urban centre i , given an existing value for an index of urban exposure (E_i).

The population potential model has a number of limitations as an analytical tool in developing regions, and Babarovic notes some of them in his report. Among the most important limitations, however, is that the methodology only provides indications of the growth-centre potential for existing urban places in relationship to the national urban system, and does not suggest guidelines for locating services and facilities to stimulate the growth of new urban places.

Other, less complex methods were used in India to identify efficient locations for growth centers at each level of the spatial hierar-

chy. Manual methods of absolute or relative partitioning, using maximum travel distances as standards, assist in determining which settlements should be identified as potential service centers to supplement existing centers in areas poorly served by town-based functions. The technique applied in various districts of India for relative partitioning used the following procedure:⁶¹

- a. Identify the largest and most functionally complex settlement in the region;
- b. search in all directions for other settlements inside or outside of the region (but not farther outside than the approximate diameter of the region);
- c. draw lines from the most important place to settlements of approximately equal importance identified in step b, using transport routes if places are connected by reasonably direct links or, otherwise, straight lines;
- d. bisect each of these lines and construct perpendicular lines at these points of bisection;
- e. the innermost area formed by the intersection of these perpendicular bisectors delineates the sub-region that will be served from the most important centers with functions not offered by subsidiary centers, and other areas will be served from other central places;
- f. identify settlements of local importance performing some functions found in higher level centers within the area of this boundary; and
- g. select subsidiary centers to become lower order service centers from among these places, so that they are distributed approximately uniformly over the boundary area.

The selection of subsidiary centers could follow one of three models: settlements at the edges of the boundaries between major cen-

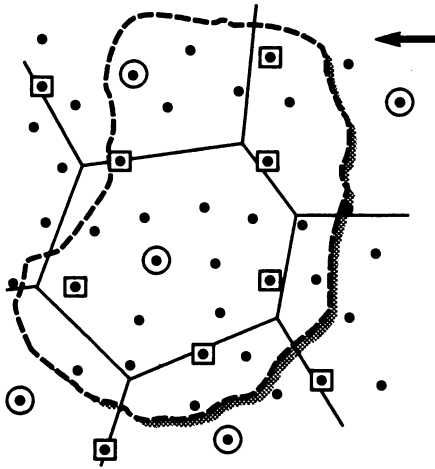
ters, at the corners of the boundaries around major centers, or on either side of the boundaries between major centers (Fig. 6). Local variations in topography, settlement pattern, transportation, and social interaction should be taken into consideration in applying the criteria for selection.

Determination of Regional Development Needs and Adequacy of the Spatial Structure

Examining the plans of the Bicol River Basin Development Program, the project staff concluded from the spatial analysis that adjustments would be needed in investment strategy over the next few years.

First, it suggested that BRBDP plans, based on the assumption that the Basin is now a cohesive economy, be re-examined and fundamental changes be made in planning strategy to integrate the Basin economically and spatially. At least five sub-area economies operate almost independently of each other. Naga and Legaspi cities and their immediate rural hinterlands form two largely autonomous economic areas and a cluster of villages surrounding the smaller city of Iriga from another. Smaller, primarily subsistence, agricultural trade areas are scattered in rural municipalities of the Basin operating at relatively low levels, in virtual isolation. They are centred on small regular or periodic markets. Finally, relatively isolated rural areas with subsistence agricultural and fishing economies and with access only to small periodic markets, or none at all, are found in coastal and peripheral areas of the Basin.

Second, the BRBDP's IAD boundaries, which were drawn on the basis of water resource and physical criteria, will be less useful for later economic development planning since they take virtually no cognizance of economic and spatial sub-systems in the Basin, and in fact divide what seen to be economically related clusters of communities. The staff suggested that more attention be given to how IAD development will integrate rural production areas with urban-centred marketing towns, and promote market-centre growth, spatial specialization,

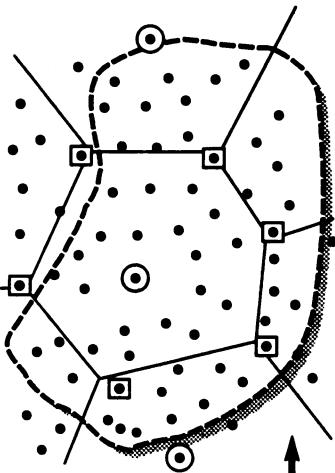


Planning Model A.

In this model the subsidiary centres are located along the edges on the boundaries between the major centres.

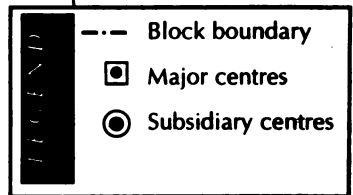
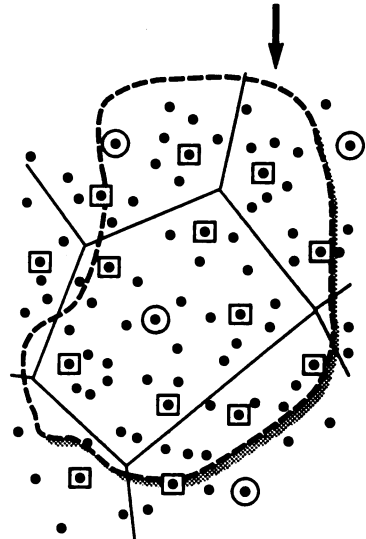
Planning Model B.

In this model the subsidiary centres are located at the corners of the boundaries around the major centres.



Planning Model C.

In this model the subsidiary centres are located on either side of the boundaries between the major centres.



Source: C. Andrade, S. Banerji, H.B. Fisher, G. Rushton, N.S. Saini, A. Sharma. *A Graphical Approach to Settlements Planning for Integrated Area Development* (New Delhi: Ford Foundation, n.d.) pp 45-47

and division of labour and exchange among settlements. The settlement-system analysis, analytical maps, and linkage studies done in the Urban Functions in Rural Development project provide the basis for evaluating and redrawing IAD or other planning unit boundaries.

Third, it was suggested that the BRBDP and other national ministries operating in the Basin give immediate attention to providing increased transportation access to a large number of rural areas. The staff noted the improbability of BRBDP attaining its goals of increased agricultural production, economic diversification, and more equitable distribution of services and facilities without first extending transportation access. A network of all-weather and farm-to-market roads is an essential precondition to extending services to rural people, locating agro-processing facilities in rural areas, and providing access to the services, facilities, and productive activities now located in the larger towns, or for decentralizing those functions to smaller communities.

Fourth, they noted that the paucity of markets and market towns with the Basin requires the immediate attention of BRBDP planners. Future investments in services, facilities, and infrastructure must be located strategically in existing or incipient rural service centers to stimulate the growth of markets. Without a well-dispersed, integrated, and easily accessible network of market centers in rural areas it is unlikely that farmers will increase production to the levels projected by the BRBDP. The BRBDP has, to this point, concentrated on planning for the provision of agricultural inputs to stimulate production, but has given little attention to marketing and distribution of outputs. Experience in the Philippines and other developing nations clearly shows that both must be done simultaneously. The UFRD study pinpointed the location of existing or incipient market centers and the analysis, supplemented by more intensive marketing studies, can be used to plan the location of investments that will stimulate rural market-centre growth.

Finally, the UFRD study provided a descriptive profile of all settlements and of the distribution of services and facilities in the Basin

that could be used in developing more detailed locational criteria for investments in public services and facilities, infrastructure, and private productive activities. Plans must be made for increasing the access of the rural poor to town-based services and facilities, building and integrating settlements of sufficient size to support a diversity of productive and social functions, and co-ordinating agricultural with industrial development projects. The study recommended that BRBDP create "minimum packages" of investments for three major types of settlements: rural service centers, market towns and small cities, and regional trade centers.

Translation of Spatial Analysis and Development Plans into an Investment Programme

This aspect of the project involved two planning activities. First, the planning analysis is translated into an investment programme that identifies the types and locations of projects needed in the region, suggests appropriate projects for overcoming "gaps" or bottlenecks to development of sub-areas within the region, and recommends investments that will build the locational advantages of strategically important settlements in the regional spatial system. Second, the projects should be combined into "investment packages" for various locations in the region, and the investment packages should be combined into an operating plan for development of the region over the next planning period. The investments are ranked by priority and sequenced for funding and implementation. Supplementary investments and support services are identified and included in the annual operating or short-term investment plan.

From the various functional and spatial analyses, the staff of the Bicol project was able to identify a set of appropriate services, facilities, and institutions needed at each of three levels of settlement - rural service centers, market towns, and regional urban centers- to meet basic human needs, articulate the settlement system, and stimulate resource development (Table 11).

Table 11. Services, Facilities and Infrastructure Proposed for Each Settlement Level, Bicol River Basin.

General functions	Rural service centres	Market towns and centres	Regional urban centres
Transport and communication	<p>Surfaced, all-weather roads</p> <p>Farm access roads</p> <p>Bus stop</p> <p>Regular bus or jeepney service to rural collection points</p> <p>Gas station</p> <p>Telegraph service</p> <p>Postal service</p>	<p>Asphalted, all weather roads</p> <p>Bus terminal</p> <p>Trucking or bulk-distributing</p> <p>Regular bus or jeepney service to rural service and regional urban centres</p> <p>Gas and service station</p> <p>Auto spare-parts retail store</p> <p>Telegraph-radiogram service</p> <p>Postal services</p>	<p>Concrete highway to major urban centres</p> <p>Bus terminal with major repair facilities</p> <p>Auto and machine repair shops</p> <p>Vehicle and machine spare-parts shops</p> <p>Regional and interregional trucking and bus services</p> <p>Gas and service stations</p> <p>Railroad, port and air terminals</p> <p>Telephone exchange linked to major urban centres and market towns</p> <p>Postal distribution centres</p>
Marketing, trade and shopping	<p>Periodic market facilities</p> <p>Farm implements and agricultural supply shop</p> <p>Marketing co-operative outlet</p> <p>Storage facilities</p> <p>General Store or sari-sari stores</p> <p>Milling facilities</p>	<p>Daily market facilities</p> <p>Retail outlets for farm supplies</p> <p>Wholesale outlets for farm implements</p> <p>Cold storage and warehouse facilities</p> <p>Grocery shops</p> <p>Household-goods retail shops</p> <p>Gridding and bulk-assembly facilities</p>	<p>Diversified daily market</p> <p>Distribution outlets and sales offices for farm machines</p> <p>Farm-supply wholesalers</p> <p>Cold storage and warehousing</p> <p>Agricultural commodity brokers and distributors' outlets</p> <p>Diversified commercial retail and wholesale establishments</p> <p>Retail outlets for consumer goods, household goods</p> <p>Consumer speciality shops</p>
Industrial and manufacturing	<p>Cottage industry</p> <p>Small-scale craft shops</p> <p>Small machine repair shops and metal shops</p>	<p>Bulk-commodity processing</p> <p>Agricultural processing plants</p> <p>Small-scale consumer goods manufacturing facilities</p> <p>Small-machine, implements and metal shops</p>	<p>Agro-industry and agribusiness facilities</p> <p>Commodity processing and packaging</p> <p>Rural goods production and distribution facilities</p> <p>Small tool and implement production facilities</p>

cont.

General functions	Rural service centres	Market towns and centres	Regional urban centres
Finance	Rural bank Credit co-operative	Commercial and savings bank facilities Rural bank with non-agricultural loan programme Credit co-operatives Money lenders and pawnshops	Development and commercial bank branch Savings and loan associations Insurance and financial establishments Urban and rural credit co-ops Brokerage firms Chambers of commerce Small industry and business incentive programme
Public utilities	Piped water supply point Small water filtration facilities	Electrical energy station Residential piped water supply Residential and commercial area drainage systems	Electric supply grid Piped water system Sewerage and drainage system Waste disposal system
Administration	Municipal service office Barangay government office Police or PC sub-station Municipal court branch Agricultural extension station	Municipal or barangay gov. office IAD team headquarters office Police or PC station District offices of agricultural extensions Judicial facilities National ministry programme district offices	Provincial government offices Municipal hall and administrative offices Regional planning and development agency offices Municipal and provincial court Branch offices of national ministries Regional office headquarters
Recreation and social	Paved basketball court Multi-purpose community centre	Paved basketball court Small gymnasium/auditorium restaurants and coffee shops Cinema Playground with facilities	Paved basketball courts Parks and plazas Cinema with daily run Hotel with nightclubs Restaurants Gymnasium/auditorium Multi-purpose community centre Diversified social activities

General functions	Rural service centres	Market towns and centres	Regional urban centres
Education	Primary schools Vocational education facilities	Primary schools High schools Vocational schools Extensions and home economics classes Agricultural demonstration facilities	Primary and secondary schools Small colleges and technical schools Specialized vocational training programmes Regional agricultural research station
Health	Dispensary-clinic maternal/child care service	Multi-purpose clinic Area health office Physicians, dentists Drugstore	General hospital Public health offices Physicians, dentists, surgeons Retail pharmaceutical outlets

1. Rural Service Centers would contain services and facilities to assemble agricultural commodities for marketing, provide local periodic marketing functions, extend transport access to market towns and larger urbanized centers, accommodate small-scale agro-processing and handicrafts, distribute credit, market information and other technical inputs, facilitate savings mobilization, and provide basic health, recreation, educational, and administrative services.
2. Market Towns and Centers would provide an area-wide exchange point for trade in agricultural commodities, processed goods, households and common consumer products, and farm inputs; offer access to an all-weather road network; serve as a node of transportation and distribution linked to regional centers within the Basin; provide the preconditions and infrastructure to stimulate agro-processing plants and small-scale bulk commodity handling facilities; make available a variety of rural financial and credit services; meet rural energy and utility needs; provide higher-level administrative services that cannot be found in rural service centers; and offer vocational and secondary education, health and child-care services, and rural commercial services.
3. Regional Centers would be physically linked to each other and to urban centers outside the Basin by frequent and reliable transportation and all-weather roads, offer diversified commercial, financial, professional, and administrative services, and accommodate regional offices of national government ministries and branch offices of provincial government agencies; provide facilities for large-scale and diversified markets, function as a communications node for a broad rural hinterland, provide sites for agri-business and large-scale agricultural processing; offer incentives for a variety of small-scale consumer-goods industries, tool-making and repair workshops, machine shops and light durable-goods industries; offer higher educational opportunities and more specialized vocational training, and provide diversified and multi-purpose hospitals and health clinics.

The recommendations of the Urban Functions in Rural Development project in Bicol were guidelines for investment analysis and project identification rather than detailed proposals for particular investments in specific locations.

Examples were given of the types of settlements that might be strengthened through integrated investment, but a systematic evaluation of potential growth centers, as had been done in India and Brazil, was not part of the Bicol project. Time and budget constraints prevented the project staff from actually proposing, and testing the feasibility of, specific investment projects.

The next logical step, of course, would be to assign priorities to investments in specific functions and locations. Not all of the infrastructure, services, and facilities that are needed can be financed at once, nor can all settlements be strengthened and up-graded at the same time. Criteria must be established for choosing the towns and villages that will receive investments first, and a ranking system must be created for sequencing investments in various functions and settlements over a four- or five-year planning period.

Creation of a Monitoring System and Institutionalization of the Planning Procedure

Two activities form the final stages of integrated regional development planning. First, an evaluation system must be created for monitoring the implementation of projects and programmes, and for determining the substantive results of development activities on marginal areas and population groups within the region. Second, the planning procedures should be institutionalized in local or regional public agencies charged with investment decision-making and with revising the spatial analysis and development plans at appropriate intervals. In the Bicol River Basin, the Urban Functions in Rural Development project sought primarily to devise and test a methodology for integrated urban-rural development planning, and the details of institutionalization and monitoring were left almost entirely to the Bicol River Basin Development Program. The project staff recommended

that a small follow-on project be funded by USAID to complete the project identification work and to assist BRBDP with organizing future spatial analysis efforts.

VII. CONCLUSIONS AND IMPLICATIONS

Experience with development in the Third World over the past three decades clearly indicates that traditional macro-economic approaches to accelerating growth will have little effect on ameliorating poverty in marginal regions with spatial structures such as that in the Bicol River Basin. Simply reallocating national investments more equitably among regions or favouring those previously given low priority, although necessary, are not sufficient to reduce spatial inequalities, incorporate marginal populations, or increase the access of the poor to the resources necessary to free them from poverty. Similarly, traditional "growth centre" approaches to spatial planning are likely to exacerbate already severe urban and rural differences within regions. Given the highly skewed, poorly articulated, and weakly linked settlement hierarchies within rural regions, these policies often replicate national patterns of economic dualism at the regional level, leaving the vast majority of the rural poor living in scattered villages with little access to the benefits of investments concentrated in the growth centers.

Instead, a strategy combining reallocation of national investments among regions and the selective location of various combinations of infrastructure, social services, facilities, and productive activities in settlements at different levels in the spatial hierarchy must be pursued in order to articulate spatial systems in marginal regions, extend services to the rural poor, and increase their access to town-based functions.

A national strategy for marginal area incorporation and development involves four major components.

First, the strategy must seek to deconcentrate important development investments from already burgeoning primate cities and metropolitan centers to other less developed regions, both to provide the

opportunities for developing potential resources in those regions and to create a more articulated and integrated national space economy. In countries like the Philippines this requires a regional investment programme primarily focused on rural industrialization and infrastructure support -one that extends communication and transportation linkages to peripheral areas and promotes investment in agribusiness, small- and medium-scale industries, and local consumer-goods manufacturing using indigenous resources. Such a strategy, in addition to providing the means for absorbing, processing, and distributing agricultural surpluses could also provide a wider range of household and local consumer goods to rural people at lower cost, and expand off-farm employment opportunities. The International Labour Office observed the paucity of appropriate industries in the rural Philippines and that "in spite of substantial transport costs, textiles are shipped from Manila to the smallest towns in Mindanao. Shoes are produced only in large towns. There is, in short, a surprising absence of the kind of lower cost adaptive consumer good produced for the domestic rural market and traded among and within the islands."⁶²

Although the Philippines has extensive programmes for industrial promotion, these alone will not generate the volume of private investment needed to vitalize and diversify marginal economies. Indeed, the promotion programmes have generally benefitted those industries that located where previous priorities for infrastructure investment have made operation most advantageous -in and around metropolitan Manila. Unless infrastructure investments are also deconcentrated and support facilities extended to rural areas, private investment will not precede them. The World Bank has argued that "to direct investments into desired locations it is absolutely essential to provide adequate supporting infrastructure such as electricity, water, transportation and communications as well as financial and technical services and a supply of qualified labor." The Bank notes that "fiscal incentives without these provisions are unlikely to stimulate much new investment in the outer provinces, and with such infrastructure incentives are probably not needed."⁶³

A second element of the strategy requires careful location and “decentralized concentration” of relatively higher population threshold investments in intermediate and secondary cities, which would serve as inter-regional production centers, act to counter-balance continued rapid growth in primate cities, and become part of a network of domestic exchange and market centers. The World Bank correctly observes that “to date the intermediate size cities have been neglected in the Philippines as a focus of policy.”⁶⁴ The high priorities that Manila received in public investment and expenditures allowed the metropolitan area to grow at the expense of both rural areas and other urban centers. Manila’s primacy is now extremely high, with well over ten times the population of the next largest cities -Davao and Cebu. Yet these two smaller metropolitan areas and a number of other secondary cities -such as Iliolo, Zamboanga, Bacolod, Cagayan de Oro, Angeles, and Olongapo- might serve as inter-regional production and exchange centers if appropriate investments were made in public infrastructure and productive activities.

Third, as the final report of the Bicol River Basin Urban Functions in Rural Development project pointed out, a spatial strategy for more equitable development requires locating infrastructure investments and productive activities within regions in such a way as to articulate the spatial system and integrate urbanized centers and rural hinterlands. A deliberate policy of decentralizing investment in lower population threshold functions and combining in “minimum investment packages” the services, infrastructure, and facilities needed to promote functional specialization and trade among settlements within rural regions is essential for accelerating and spreading the benefits of development. Articulation of the spatial system implies the development of at least three levels of settlements within regional economies: rural service centers, small cities, and regional centers.

With careful allocation and packaging of investments, towns and villages that already exist within marginal regions of developing countries could be made to perform these three levels of functions. In some regions substantial investments would be necessary to create regional centers, and in most areas the paucity of market towns and

rural service centers would require careful analysis of incipient centers prior to designing investment packages. Creation of this hierarchy of settlements, however, would provide a spatial framework for spreading the benefits and increasing the multiplier effects of public and private investment.

Finally, creation of a more equitable development pattern requires increasing the linkages among rural settlements and between them and urbanized centers within regions. Among the most important linkages are farm-to-market roads and all-weather arterials between market centers and larger towns and cities. It is inconceivable that the Philippine government, for instance, will be able to attain its goals of increased agricultural production, economic diversification, and more equitable distribution of services, facilities, and income without first extending transportation access within and among regions. A network of all-weather and farm-to-market roads in regions like Bicol is an essential precondition for extending services to rural people, promoting investment in agribusiness and small-scale manufacturing, and providing access for rural people to the higher threshold services and facilities that must be located in cities and poblaciones. Without access to markets farmers will simply not increase output. The costs of transporting agricultural goods in peripheral areas of regions like Bicol wipe out marginal profits of increased production for farmers without access to roads and highways.

This four-pronged strategy of regional reallocation of investments in infrastructure, the gradual building up of secondary and intermediate size cities as interregional production and market centers, articulating the spatial systems of marginal regions, integrating town centers with rural hinterlands, and increasing linkages among settlements in rural areas, would both promote greater spread effects from development in larger urban centers and generate more diversified economic growth in smaller rural villages. It combines "bottom-up" and "top-down" development strategies to forge an integrated national economy in which the benefits of accelerated growth could be more equitably distributed and the high levels of rural poverty more easily and effectively ameliorated.

All of this must be done carefully, however, with sensitivity to the needs and capabilities of people living in marginal areas and to the nature and characteristics of the eco-systems in those regions. As Rondinelli and Ruddle have argued elsewhere, and in more detail, such planning must employ a “transformational” development approach. Transformational development seeks to increase incrementally the productivity of indigenous resources, institutions and population groups, reinforcing practices and building on organizations that are appropriate to local conditions and needs and adaptive to changing circumstances, and gradually displacing those that are not.

The concept of transformational development involves eight basic principles:

- 1. building on existing culturally embedded resources, institutions, and practices;*
- 2. involving local people, who will be affected by transformation and change, in the processes of development planning and implementation;*
- 3. adapting modern technologies, services, and facilities to local conditions;*
- 4. promoting specialization in production and exchange activities based on existing spatial comparative advantages;*
- 5. using appropriate, low-cost, culturally acceptable methods of change to generate “demonstration effects” that lead to widespread adoption of those that prove successful;*
- 6. planning for displacement of unproductive and unadaptable traditional institutions and practices as change occurs;*
- 7. establishing, through planning based on “strategic intervention,” the preconditions for transformation and change in social, technical, political, economic, and administrative structures and processes and in elements of the spatial structure; and*

8. *creating a planning process that is flexible, incremental, and adaptive and that provides for experimentation and adjustment as transformation takes place.*⁶⁵

Organizational transformation and spatial integration are inextricably related in the development of resource systems in marginal areas. They must be carefully planned if marginal populations are to be effectively assisted in increasing their capacity to procure, transform, and deliver the resources needed to raise their standards of living.

ACKNOWLEDGEMENTS

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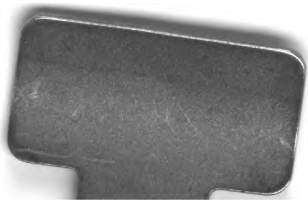
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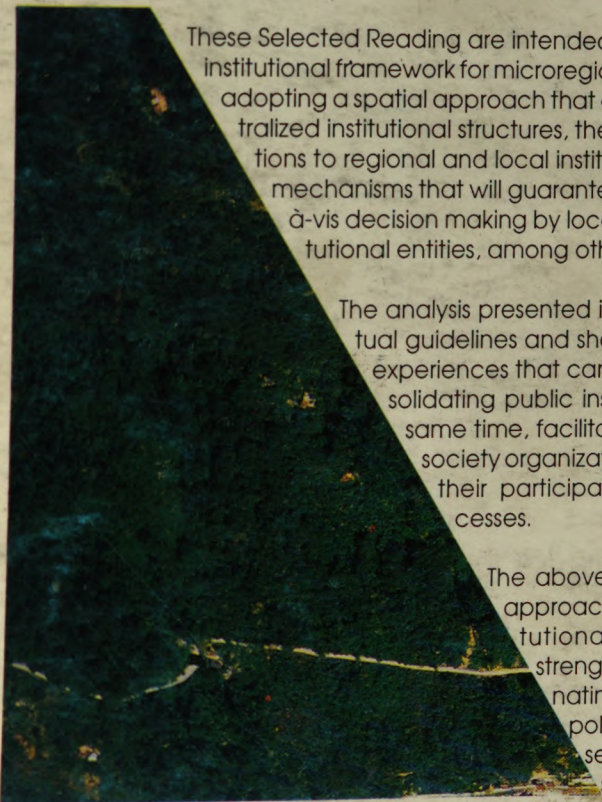
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Most evaluations of rural development programs and projects in the hemisphere have concluded that the unsuitability of the institutional framework and its complex organizational structure have, in many instances, been two of the main factors responsible for the poor results achieved over the last three decades.



These Selected Reading are intended to orient the design of a new institutional framework for microregional sustainable development, adopting a spatial approach that calls for the creation of decentralized institutional structures, the effective delegation of functions to regional and local institutions, the creation of funding mechanisms that will guarantee a measure of autonomy vis-à-vis decision making by local governments and local institutional entities, among others.

The analysis presented in this book proposes conceptual guidelines and shares institutional development experiences that can be used as the basis for consolidating public institutional systems and, at the same time, facilitate the creative design of civil society organizations, with a view to enhancing their participation in decision-making processes.

The above forms part of a conceptual approach to an inclusive model of institutional modernization aimed at strengthening local entities and eliminating the social, economic and political and institutional gaps that separate the urban and rural sectors.