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AID IMPACT EVALUATIONS: THE LESSONS OF EXPERIENCE

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### Executive Summary

This report, requested by PPC/E/ED, reviews twenty-three of the impact evaluations carried out to date, in order to identify cross-cutting development variables and policy issues. The following findings and recommendations emerge from the review:

- . Participation by project beneficiaries in project design and implementation is essential. It has not occurred as much as would be desirable.
- . Benefit incidence is a function of the desirability, deliverability, targetability, acceptability and durability of project inputs. Durability implies that projects catalyze long-term changes beyond the sheer maintenance of the outputs themselves.
- . Projects associated with comprehensive development programs which host governments have assigned priority, including in resource commitments, have had the greatest positive impact.
- . Projects have been most successful in which there have been complementary, reinforcing inputs within or between projects.
- . In building institutional capacity projects have given insufficient attention to implementation strategy, and included inadequate analysis of the workings of key institutions.
- . Too little attention has been given to questions of appropriate technology, the uses of technical assistance, and the relative strengths of different kinds of intermediaries.
- . Projects have given inadequate attention to cross-sectoral linkages, e.g., between improved production and yields, on the one hand, and employment generation, on the other.
- . Insufficient attention has been given in projects to the linkages between national-level government economic policies and implementation of projects at the local level in specific environments.
- . The studies suggest the advisability of reconsidering AID project design and implementation practices through increased project time spans, more use of decentralized project development, and improved social and institutional analysis before and during project design and implementation.
- . Better social analysis would help place AID projects upon more firmly grounded socioeconomic and political-institutional assumptions. Prevalent dubious assumptions include the probability of "multiplier effects," national policy legitimation, beneficiary commitment, common interests of the poor, and the capability of institutional structures as anticipated.

Recommendations of this review include:

- . Increased attention in project design and implementation to socio-economic and political processes actually at work in prospective project environments.
- . Increased attention to implementation strategies for overcoming foreseeable obstacles to achieving positive project impact.
- . Increased attention to respecting or influencing the perceptions of prospective project beneficiaries.
- . Consideration of lengthening project life.
- . Increased attention to the nature and uses of technical assistance.
- . Increased attention to linkages between the interests of host country planners and project participants.
- . Increased attention to linkages between project activities and working host country development strategies and economic policies.
- . More emphasis on social and institutional analysis in the identification, design and implementation phases.

We believe future impact assessments should:

- . Consider the bearing of evaluation findings for improving project social analysis.
- . Devote more attention to the appropriateness of technology and to the possibility of alternative technologies.
- . Give more attention to environmental impact.
- . Arrange for surveys in advance of team arrival where possible, as some recent evaluations have done.
- . Give more attention to project management both by AID and by host country officials.
- . Give more attention to the institutional dimensions of projects and to the roles of technical assistance in institutional improvement.
- . Devote increased attention to project costs.

## AID IMPACT EVALUATIONS: THE LESSONS OF EXPERIENCE

The current series of impact evaluations was authorized by the Administrator of the Agency for International Development in October, 1979 to enable the Agency to acquire a better understanding of what difference its projects make in the lives of anticipated beneficiaries and for the equitable growth of the countries in which they are carried out. A secondary purpose of the impact evaluations was to increase the ability of AID direct-hire employees to assess impact and to feed lessons learned back into policy and program planning, project design, and project implementation to achieve lasting project success.

This report was requested by the Studies Division of AID's Office of Evaluation in order to harvest the findings and lessons learned from twenty-three of the first available impact evaluations. While other reports consider the lessons learned sector by sector, this report seeks generalizations and conclusions that apply across sectors.

In presenting our findings, we acknowledge three sets of limitations. First, this is a non-representative sample of AID's projects. The twenty-three evaluations we have reviewed are in fact disproportionately focused on infrastructure projects including roads, irrigation, electrification, and potable water systems. Second, we have not interviewed those who participated in the respective impact assessments, although we have had extensive discussions with some of those who have been in charge of designing and implementing the process. Third, we have not gone back into the files to read the project documentation for those projects assessed in the impact evaluations. What we know of the projects and of the evaluation methodology is what we have discerned from the reports themselves, some participation in team debriefings, discussions with staff of the Office of Evaluation, and with a non-representative sample of several evaluation team members.

We have singled out the following variables for analysis based on their prominence and importance as expressed implicitly or explicitly in the impact evaluation studies:

- participation
- benefit incidence
- structural change
- national policy
- cross-sectoral linkages
- complementary services
- institutional capacity
- technical assistance and technology transfer

In addition we have also looked at the following project design and implementation variables whose importance we believe is attested by the findings of the studies:

- length of project life
- critical assumptions in project designs
- social and institutional analysis

We believe each of these variables deserves further exploration and consideration in future evaluations and project design work. An annex deals with economic analysis in the impact evaluations, including questions of recurrent costs and cost-effectiveness.

### Participation

Local-level participation by actual or potential beneficiaries in shaping the processes of development is addressed in virtually all of the impact evaluations completed to date. In only three is there a suggestion that it may be possible to promote significant improvement in standards of living for the poor without such local-level involvement: Korea Irrigation, Costa Rica Electrification, and possibly Indonesia Irrigation. In all three cases, however, the limits of rural development could be attributed to the absence of benefits associated with participation. In the other twenty impact evaluation reports, the extent and quality of local involvement in development decision-making and management tasks are cited as positive factors in development success, or their absence is linked to principal project shortcomings.

The reports recognize a variety of forms which local-level participation in development may reasonably take, ranging from organization of labor teams to build roads in Colombia and Kenya to development of financing and financial management practices to sustain rural water development in Thailand. Several reports, notably on Thailand Roads and Philippines Irrigation, count the psychic involvement of people at the grass roots implicitly as a form of participation. The Thai Roads project was pre-eminently a Thai rather than an AID initiative, and the sense of the report is that the commitment to road building extended to the grass roots largely for that reason.

Participation is linked to training in at least two instances, Morocco Food and Nutrition Education and CATIE, Small Farmer Cropping Systems. In the former case, participation takes the form of widespread enrollment by women in nutrition education centers linked to the distribution of food. In CATIE, the meaning of participation is the contribution made by local farmers on their own plots to the knowledge of technicians seeking to improve crop varieties and farming practices.

Finally, several of the reports observe implicitly that successful development impact involves assertion by the intended beneficiaries of their own developmental priorities. Electrification was apparently not a high priority at the local level in the Philippines; the Sudan Irrigation project appears to have ignored farmer interest in crops other than cotton; and the Bolivia electrification report contrasts the priorities of the poor, interested in improved quality of life, with the project's ambiguous additional emphasis on productive benefits of electrification.

A salient feature of the reports' discussions of participation is the emphasis on function rather than process, i.e., participation by local people is recognized as essential to make possible fulfilling functional requirements of development such as mobilization of labor or maintenance of infrastructure once built. Very few reports discuss the way in which increased participation might actually occur, what processes are at work or could be instituted by which the poor might, or actually do, affect the development process. The Colombia Roads report is an exception. The Indonesia Irrigation report hints at the existence of local, traditional participatory water management mechanisms but does not explain them fully, nor why they were not successfully integrated into the project.

The instances of successful projects being materially aided by effective local participation are fewer than cases of project shortcomings attributed, in part, to the absence of participation. The roads projects in Colombia, Sierre Leone and Kenya have been strengthened by strong local involvement. Village committees have become managerially and financially semi-self sufficient in potable water development in Thailand. The CATIE report underlines the potential for improved agricultural research through listening more closely to the views and insights of farmers and working with them on their own plots. Cooperatives managed roads competently in Honduras after major government interventions to give the cooperatives legal standing and promote land reform. Most of the other reports find important negative development consequences linked to the absence of local-level participation.

In four cases - Kitale Maize, Philippines Electrification, Costa Rica Electrification, and Indonesia Irrigation, participation in infrastructure development benefits was limited because the beneficiaries themselves have not been primarily the rural poor majority. The benefits of Kitale Maize were not accessible to many smallholders because the kind of participatory research and extension described in CATIE did not occur. Extension agents' recommendations were too costly for a number of small farmers. Storage, marketing, and credit policies of the Kenya government were not attuned to small farmer needs. If the small farmer is to benefit "it will require," according to the report, "not only better long-range planning but wider popular participation." The electrification cooperatives in the Philippines have been run by middle-class professionals and the benefits have not been readily accessible to most rural poor, being too costly for paddy farmers. Similarly, in Costa Rica low levels of participation were associated with the lack of appropriateness of electricity in many small farmer agricultural pursuits. Lack of participation is described as a major flaw in the Indonesia Irrigation project, since landless persons and sharecroppers did not acquire any of the benefits. In fact, they were frequently displaced by more fully utilized family labor and/or by landowners who decided it had become profitable to manage their plots themselves. Increased land values associated with irrigation resulted in greatly increased rents to tenants and sharecroppers which are only partially offset by higher yields. The general lesson, therefore, is that failure to introduce participatory processes in rural development has been one reason why more broadly based rural productivity has not occurred.

These four cases pose the issue of the viability of development efforts that do not reach the poor and, therefore, of non-participatory development processes. In the two electrification cases, one might argue that participation can successfully be limited to more affluent beneficiaries at least in the short term, the real cost arising not from the absence of viable and popularly based development organizations, but in income inequalities exacerbated by development assistance focused on the non-poor. The absence of participatory processes at the local level contributed in Indonesia to an immediate worsening of the condition of the poorest groups, and to a failure to expand the agricultural production base and agricultural earnings in Kenya. In all four cases, therefore, one could argue that local participation is a valuable indicator of factors which, unchecked, can diminish growth and economic and political stability at the national level over the long term.

In a number of projects, serious and fundamental negative development consequences have attended failure to engage the poor in dealing with development processes directly affecting their interests. The Korea Irrigation report concludes that participation was not a prerequisite for project success in Korea but at the same time observes that even successfully installed irrigation systems plus land reform and high producer prices have not generated widespread local confidence and belief in the possibility of long-term enhancement of rural standards of living. In Liberia, the extension of roads into previously isolated areas has been associated with increased individual urban elite "purchases" of rural land that has historically been the basis of social structure and community integrity of rural ethnic communities. The result has been that the projects have facilitated the processes by which the urban-based Americo-Liberian elites have expanded their economic and political domination over the interior. It is not clear at this writing how far the post-coup government of Liberia has succeeded in reversing this trend.

Failure of the Government of the Philippines to understand the implications of the irrigation project for the financial condition of smallholders, despite the formal presence of irrigation associations, has threatened to mire rural producers still deeper in debt than they were before and in turn to undermine the long-term national economic gains the government sought through the project. Were the Rahad Corporation in the Sudan to take account of local expressions of interest in crops other than cotton, the economic viability of the irrigation project might be greatly enhanced. As it is, the economic gains from the project have been very limited despite the size of the country's financial and managerial investment in a project designed to help raise national agricultural productivity.

The consequences of ignoring the poor are in some instances more diffuse, less immediate, and less palpable than running afoul of those in possession of greater resources. Closer incircumstances to governing elites, the adverse consequences of projects on the more affluent are perhaps more readily apparent to those in power. Empowerment of the rural poor can be a means of giving expression in immediate political terms to problems than in the long run affect not only the poor but the country as a whole. The Korean Irrigation study suggests strongly that failure to engage the poor may in the long run endanger the economic

health of the country. More local organization in Liberia in connection with roads projects might have brought more official attention to problems of the kind that eventually inspired the recent coup.

Finally, there are limits to the promotion of participation in development. In Ecuador, cooperatives were forced on an electrification project in a way that local people found less than fully acceptable. Maintenance of infrastructure can be an important function of participatory local organizations, but the Colombia roads project suggests that there are technological limitations to such enterprise. Participation in the creation of health huts in Senegal without corresponding measures to ensure their financial viability produced both local frustration and project failure.

### Benefit Incidence

Five key assumptions underlie AID programming of benefits in the projects reviewed: (1) desirability, (2) deliverability, (3) targetability, (4) acceptability, and (5) durability. Underlying these assumptions are corresponding fundamental questions. First, in whose interest are the projects launched and why? Second, do policies and practices of the government in toto permit delivery of the inputs to those for whom they are intended with acceptable socioeconomic and political costs? Third, are the projects designed and implemented in a fashion that permits focusing the benefits on a particular group or community so that their position vis-a-vis more fortunate classes is improved? Fourth, are the project inputs presented in a way that in fact-and in the perception of the intended beneficiary groups-improves their lot? Fifth, are the benefits conveyed durable, meaning not only that they are sustainable in a technical, engineering, and financial sense over a period of time, but that they set in motion, catalyze, or complement lasting changes improving the quality of life enjoyed by the projected beneficiaries?

1. Desirability. In the assessment of the evaluation teams, the projects reflect a variety of incompatible or inconsistent purposes. Projects that seek to ensure national self-sufficiency in one commodity, and also have as an objective increasing small farmers incomes, may founder when such objectives are mutually contradictory in a given policy environment. In a number of the projects evaluated, it is unclear whether the project is intended to improve the rural economy as a whole, with benefits "trickling down" to the poor, or whether improvements in the position of certain poor groups are deemed likely to stimulate processes that will benefit the economy as a whole. Many of these projects were initiated before the New Directions policy, and thus before there was much serious attempt to target benefits to the poor majority. In general, in most of the projects the ways in which linkage is likely to occur between national economic and political objectives and the improved well-being of beneficiary communities were apparently not clear in the projects, although this question is sometimes raised in the evaluations.

It is perhaps naive to suppose that any government would invest in improving the standard of living for the poor majority with whom AID has more recently been concerned without seeing in such investment gains for the country as a whole. Careful articulation of those larger interests in consultation with host country officials might well serve to place projects focused on the poor on a more honest footing, and might increase the legitimacy of AID and host country attention to poor communities. To accomplish such understandings, however, the expertise of many disciplines -- from econometrics to social anthropology -- must be engaged, and the capacity of these disciplines to relate to one another's concerns must be enhanced.

2. Deliverability. AID project design methodology often leads to preoccupation with internal logical consistency of input-output-purpose relationships in given projects. This is the case despite nearly universal recognition that host country policies, or even other foreign assistances projects, many undermine with one hand what the projects themselves attempt to accomplish with the other. In project documents, there is relatively little specific consideration of how constraints arising from policies outside the immediate framework of a particular project are to be dealt with. Even where it is argued with some justification that projects can be islands of progress within generally adverse circumstances, projects do not appear to give much consideration to implementation strategies for coping with the constraints and obstacles anticipated or understood. The Liberian Roads report advances a particularly eloquent case for the possibility that there may have been means of eliciting support or maneuvering interests antithetical to the project into benign neutrality. The implications of the Philippines Irrigation project for the debt levels of local farmers might have been anticipated and the project financed and managed correspondingly. The lukewarm support by the Government of Kenya for the task of addressing rural poverty did not originate with the water and roads projects reviewed in these impact evaluations. The Kitale Maize projects have not been sustained by the Government of Kenya partly because the projects did not exact commitments during the life of the projects to post project furtherance of project activities. The support of the Government of Colombia seems to have been quite problematic from the start in the otherwise apparently very successful Pico y Pala roads project.

3. Targetability. As has been noted, most of the projects reviewed were not specifically targetted to any particular beneficiary group, partly because many predate the New Directions Mandate and/or were not modified after enactment of the new policies. It is thus unclear whether they could have been targetted to the poor and whether the poor might actually have gained vis-a-vis more affluent constituencies. The Morocco Food and Nutrition project might have been targetted as the report suggests, to those with nutritional deficiencies since these are not necessarily the same people as those with low incomes. Several projects have not taken into account the precarious land tenure situation of those who are among the rural poor, the landless and sharecroppers in the Philippines and Indonesia, the effects of rural development on the infringement of traditional landholding communities in pre coup Liberia by the urban elites, the effects of urban subsidies of rural consumers on the likelihood of further utility investments in rural areas of Bolivia and Ecuador, the requirements of capital and skill for participation in the economic opportunities presented by electrification in the Philippines, and the

bearing of metered water on the interests of the poor in Kenya and Thailand. Land reform did not eliminate differences between richer and poor smallholders in Korea though such reforms in Honduras along with other complementary inputs, improved the meaning of road building for poorer local communities. Roads are especially valuable for those with access to vehicles, hence the relatively affluent may have benefitted especially from the Kenya roads project. Has that also been in the case with Pico y Pala in Colombia? Underemployment of landowners was greatly diminished by irrigation in Indonesia, leaving less scope for new employment of the landless rural poor.

Had these projects focused more directly on improving the lot of the poor majority, redesigning of projects and/or more specific conditions precedent might have been required to prevent the poor from effectively being denied access to the resources introduced by foreign assistance. There appear to be two kinds of barriers to strengthening the position of the rural poor by development assistance efforts: those which are the specific focus of a given project and those which, while not specifically addressed, must be at least neutralized in the circumstances of a given project if the recipients are to benefit through increased productivity, incomes, and standards of living. Implicitly or explicitly, the impact evaluation reports argue either for integrated rural development or for specific attention to "collateral" constraints in single-purpose projects if they are to achieve the purposes outlined. This point is discussed further below.

Critics of targetting, however, suggest that it requires so much administrative and financial expense that the cost-effectiveness of targetted projects is very dubious. In a larger sense, on the other hand, what are the costs and benefits of not providing development assistance to throngs of deserving poor for lack of determination in exploring ways and means of "neutralizing" collateral constraints? Might not the "front end" costs of spending more time on project design work to deal with such accompanying constraints be more than recouped by the results in improved delivery? Perhaps the additional investment in project preparation and monitoring in situ could be recovered by foreshortened ex post project review processes and diminished delays between project approval and the beginning of project implementation in the field. Implicit in this alternative is the requirement for skilled social science analysis at the micro-level if projects are to have a positive bearing on micro or macro-level economic development.

4. Acceptability. To be effective, projects must appeal to the interests of those who are expected to benefit from the resource transfers. The question of project acceptability to beneficiaries has two components: evaluation of the inputs by the recipients of the inputs and the uses to which the recipients put the new resources. Evaluation is not only a matter of psychic gratification or subjective approval by the beneficiaries. There has been ample recent evidence that low-resource producers in rural areas act rationally in terms of their interests as they perceive them. The question, therefore, is whether project inputs speak directly to those perceived interests. Whether they do

depends upon how well these interests have been understood through dialogue with the prospective beneficiaries and/or how effective training programs become in helping recipients to see their interests "more clearly."

The evaluations point out that the perceived interests of the poor have not always been adequately understood in the projects. Subjective appreciation of projects has been recorded in many if not most of the reports, e.g., Philippines Irrigation, Colombia Roads, Tunisia Water, Thailand Roads, Jamaica Roads, Honduras Roads, Philippines Electrification, and Bolivia Electrification. What is striking is the contrast between subjective appreciation of the project benefits and the economic analysis of the reports tending to show that the material benefits are at best mixed. Unwittingly, therefore, the studies carry the implication that the project recipients may not really understand their interests. Partly this conclusion may be established artificially by the kinds of questions asked beneficiaries and or the answers reported by the teams in the hurried circumstances in which they worked. The Philippines Electrification report is notable in presenting the contrast between subjective appreciation of electric power by the poor and their recognition that other kinds of development were far more in their interests.

Several reports contrast the economic interests of the project participants with those identified in the project documentation. The Indonesia Irrigation study recognizes that farmers' first concern is a secure water supply whereas the project focused only this objective only implicitly, addressing directly the objectives of bringing new lands into paddy and improving yields. The Rahad Irrigation project in the Sudan and the Korean Irrigation project did not envisage farmers being more interested in crops not addressed by the projects than those that were. The domestic value to electricity consumers was understated in relation to the "productive" uses of electricity in most of the electrification projects, notably in Bolivia. Some of the water projects were more beneficial to productivity than to the projects' health and safety objectives as in Tunisia and Thailand.

Some projects fostered the interest of some elements of the poor while disfavoring others. The Thai young were more interested in potable water and more accepting of it than the rest of the community because of the change in the water's taste. Women may have gained more from improved roads than men in terms of mobility in Liberia but suffered increased work burdens vis-a-vis men in this and other circumstances, e.g., Korean Irrigation and Kenya roads. Often, the projects appear to have brought positive benefits, negative benefits, and results of debatable benefit at one and the same time. Greater accessibility to the outside world because of road building brought benefits but also burdens. For example, is increased communication between the center and the periphery in Thailand good or bad when it means the central government can more easily enforce regulations previously quietly ignored? If the Indonesia project sopped up underemployment rather than diminishing unemployment, is that a result to be applauded or deplored? It does appear, however, that the acceptability of roads projects was more complex for these reasons than electrification or water improvement projects, because the roads projects open communities more than the other types of projects

to new influences, values, and processes. In Pico y Pala the benefits appear to have dwarfed the problematic effects in the eyes of the benefitting communities; in the other cases the assessments appear to yield more mixed results.

5. Durability. A distinction may be drawn between durability and sustainability. Projects may be sustainable if they can be fiscally and physically maintained over a substantial period of time, but they may not be durable in the sense that they do not catalyze, complement, or reinforce processes of change producing fundamental, long lasting, and/or far-reaching changes in the standard of living enjoyed by the resource recipients. The institutionalization of capacity to maintain the installed inputs in working order has been successful in some cases and not in many others, as the reports note, but their durability as defined here may be even more debatable. To put the matter another way, what have been the "multiplier effects," social and political as well as economic, of the projects reviewed? Pico y Pala, Morocco Food and Nutrition, Honduras Roads, and CATIE appear to have been projects which potentially or in actuality set in motion a whole range of positive and reinforcing processes of social change. Pico y Pala created employment, reduced transport costs, accessibility to services, a market for goods and services and for productive assets like livestock, and a strengthening of community organization by the single input of roads. Honduras' new roads has a similar effect but it took other inputs such as land reform, legal status for the cooperatives, and improved credit to achieve these reinforcing processes of development. PL 480 benefits plus nutrition education led the participants to a range of improved services under the Morocco Food and Nutrition project because the nutrition centers were strategically located in proximity to such services. The comprehensive reorganization of agricultural research under the auspices of CATIE opened up the prospect of wide ranging improvements in incomes and standards of living for the poor through these could yet not be documented at the time of the study.

Senegal Health Care proved to be an egregious example of a project in which elements necessary for sustainability, let alone durability, had not been integrated into the project design -- steps being taken to improve the design at least in part as a result of the impact study. Jamaica roads was an example of a project where the sustaining of improved roads, had it occurred, would have been unrelated to durable improvement in the well-being of the users in the estimate of the impact assessment team. Sustainability of the Philippines irrigation effort and the Rahad irrigation scheme appear to have been inversely related to catalyzing or strengthening durable improvements in the well-being of the participants. Korea irrigation may have been a case where infrastructural improvements were sustainable but the long-term durability, measured by popular commitment to improved rural quality of life, remained doubtful. By failing to engage the imagination and energies of rural people and those designated to work with them, the durability as well as the sustainability of enhanced rural Tunisian standards of living remained in question. The durability of the Kenya projects and all three Philippines projects

appeared questionable, by contrast to the two Thai enterprises, not only because of lack of capacity to maintain the equipment but because bureaucratic behavior and official policies were not geared to this end in the Kenya cases.

### Structural Change

In seeking to go beyond the usual project evaluation approach, the impact evaluation reports consider the broader consequences of the AID projects reviewed, including, to a degree, their implications for structural change in the economies and societies in which they were carried out. Most of the projects, however, were not designed to have direct consequences for structural change, and at least one, the Liberia roads, may have contributed in some measure to the later impetus to take extreme measures insofar as it ignored the possibilities for such change that land titling would have represented.

A number of the projects did have national-level objectives which were of an overtly political, as well as developmental, nature. This is true of the Thai roads and water projects, which were part of a more general national program to increase political stability in the country in general and the Northeast in particular, in these cases through provision of infrastructure, leading to increased sense of well-being and economic advancement, as well as increased access to the region. Somewhat less overtly, the Philippines and other rural electrification projects were designed to create a feeling among project beneficiaries that the government was providing services to rural areas, and that rural dwellers too were going to benefit from modernization. In some of the electrification projects, such broad political objectives seem to have been met satisfactorily while what may have actually been subsidiary development or productivity goals were less readily achieved, as in the Bolivia and Philippines cases.

It is interesting to note that none of these projects included land tenure reform, although the Korea and Philippines Irrigation and the later Honduras Roads followed on land redistribution programs. In the Honduran case, the report indicates that land reform and the entitlement of cooperatives appear to have led to more successful project outcomes. While none of the reports indicates that project activities were leading to attempts to reverse prior land tenure reforms, a few reports indicate that tenancy evictions may ensue as projects make agricultural land more desirable than it was in the past for owner cultivation. The Philippines Irrigation report indicates that to address the needs of the landless and near-landless project participants, either further land redistribution or substantial increases in off-farm employment would be necessary.

The Korean Irrigation project had a different sort of national-level objective -- to help attain self-sufficiency in rice and barley. In fact, as the report notes, rice self-sufficiency had been achieved before project funding began, and the objectives of the project for increased barley production to attain self-sufficiency were not met, partly because farmers perceived it to be in their interest to grow vegetables instead. Similarly, the Sudan Rahad scheme was designed

as part of a series of schemes to increase cotton production for export through the introduction of large-scale irrigated agriculture. Here again, farmers -- in this case tenants operating under strict plans from the Rahad Corporation -- have found it in their interest to emphasize different sorts of production from those recommended under the scheme. The Rahad scheme represents the most comprehensive centralized agricultural development attempt by a government in the sample. If successful, it might be most likely of all the projects to lead to substantial rural transformation or structural change.

At least one project, Philippines Roads, complements a series of other AID projects in a country which have all been designed to assist a government to achieve significant decentralization. While the report indicates that the kind and level of decentralization characteristic of the roads construction institutions led to too many, and too elaborate decentralized units, which are too thinly staffed and, apparently, underutilized, it does support the general trend toward decentralization which, over time, may lead to significant changes in the rural sector.

At the other end of the spectrum, a very small project, Morocco Food and Nutrition Education has had as a side-effect encouraging formerly cloistered rural Muslim women to leave their homes to come to service delivery centers. As the report points out, this may have been one of the most significant benefits of the project, one which may, if continued and spread over time, catalyze a potential social transformation.

A somewhat different potential for significant and far-reaching change is represented by the CATIE project. By establishing a radically different approach to agricultural research for the Central American countries -- one which emphasizes farming systems and farmer participation in agricultural research design and testing -- it is possible that this and follow-on projects will, over time, induce changes not only in productivity, but also in the social organization of agricultural production in those countries that adopt the approach.

Another sort of exception to the generalization that the projects reviewed have had little transformational impact is the Colombia Roads project. Here, the report indicates that previous extreme enclavement of communities in the region affected has been radically altered by the labor-intensive roads constructed, with very positive results.

Despite these exceptions, which are admittedly various and not completely comparable, the twenty-three projects evaluated essentially do what most projects do that are not integrated into comprehensive development strategies -- they have led to changes at the margin, for example in increasing agricultural productivity, much as they were expected to do. In a sense, they highlight the importance of cross-sectoral linkages and complementary policies and inputs for substantial changes in rural quality of life.

### National-Level Policies

A striking feature of the evaluation reports is their description of the uncertain relationship between host government policies and project objectives and outcomes. The Korea and Philippines Irrigation, Kenya Water and Roads, and Kitale Maize reports all stress the importance of a variety of national-level policies for project impact. In the Korean case, price support incentives for rice were seen as critical to project success. In the Philippines, by contrast, producer prices for rice, fertilizer price policy, and marketing and procurement policies are all identified as leading to situations in which project participants' incomes rose only marginally above subsistence, and where their irrigation associations were in danger of going broke. The Kitale Maize report indicates that even with great increases in maize production resulting from the adoption of hybrid seeds, the government continued a marketing policy geared toward scarcity. The Kenya Roads report points out that for significant increases in production to occur in areas newly reached by roads, changes in national marketing policies will have to occur as well. In the electrification projects and some of the water projects, evaluations raised questions about the appropriateness of government and/or project approaches to rate structures, both from an equity perspective and in terms of project sustainability and cost-effectiveness.

The reports do not investigate thoroughly whether projects themselves had an impact on changing government policies, either those that apply to the specific sectors to which the projects were confined, or policies that apply across sectors. While these projects were not designed with such objectives in mind, it would be useful to know whether they had a policy impact on the host governments, and if so, of what kind. Did governments, for example, become convinced that the AID projects' way of approaching a given sector or set of development problems was the best way to go, and the most replicable? Did these projects increase governments' commitments to certain development priorities and strategies, or were they essentially neutral in this regard? The Colombia Roads report, for example, after having argued persuasively that the Pico y Pala labor-intensive approach to road construction was highly successful, indicates that the GOC had not made a commitment to sustain the project outcome in terms of providing maintenance, or to replicate it elsewhere in the country. On the other hand, there is some indication in the Kenya Roads report that the participatory approach to road selection will be replicated elsewhere in Kenya.

The Ecuador Electrification report is instructive in this regard. It indicates that AID's "zeal" in attempting to introduce cooperatives as an institutional mechanism for extending rural electrification was essentially misguided. In discussing some of the reasons why this was so, it points out that one was the political change which occurred between the time one of the loans was authorized and the time disbursement actually began; the new military government was "openly leery" of cooperatives. Here, the stress on cooperatives for rural electrification appears to have been part of a broader AID effort to encourage cooperatives in Ecuador at the time the loans were made.

One way of getting at these kinds of questions of policy impact of discrete projects is to address the related questions of replicability and spread-effects. While there is some attempt to do this in some reports, this is an area of inquiry which seems generally to have been de-emphasized in most of them.

### Cross-Sectoral Impacts

Most of the reports address the matter of cross-sectoral impacts, whether these were designed into the projects or merely considered likely to eventuate from project inputs and outputs of various kinds. Linkages considered in most reports are (1) infrastructure-increased production; (2) infrastructure-social services; (3) infrastructure-productivity-employment, and (4) project impact-migration. In a number of the projects, basic assumptions about these kinds of cross-sectoral impacts appear to have been faulty, either because of poor analysis, or perhaps because in preparing project papers as advocacy documents more claims were made for project outcomes than could reasonably be justified. It is also worth noting that development theory and practice have changed considerably over the period of time between the inception of the oldest of these projects to the present.

Several generalizations may be made on the basis of the reports. With regard to employment, in most cases increases predicted were not achieved. Many projects claimed employment would increase substantially on and off the farm, but in some cases there was virtually no new employment created (Indonesia Irrigation), or employment gains were minimal in other cases (Philippines Irrigation). Little new productive activity -- or employment -- was generated by electrification in Bolivia or the Philippines. The Indonesia and Philippines Irrigation projects increased intensity of family labor on and off the farm, but did little to generate new employment opportunities. In the Korean case, there was, however, some positive impact on the comparative wage rates for women and men, although overall increased use of mechanization was to the advantage of men rather than women.

Roads projects -- labor intensive or capital intensive -- had some impact on employment, but results were variable and often indirect. In Kenya, roads made it easier for men to commute to jobs outside the road penetration areas. In Liberia, roads facilitated male migration to urban areas and concessions to look for work. On the whole, roads tended to increase commercial activities rather than rural industrial activities, as was the case for electrification, at least in Bolivia and the Philippines, leading to comparatively less job creation.

The Rahad Irrigation scheme poses particular problems in that extensive mechanization is planned at the same time that project villages are designed to include both tenancy holders and non-tenant laborers. Some tenants do not want to work their land themselves, which provides jobs for the local laborers. In addition, in advance of complete mechanization of cotton production, there are seasonal jobs for non-scheme laborers. The evaluation points out, however, that there are emerging problems with employment/labor policies within the scheme.

The reports do not, by and large, indicate why anticipated employment generation did not occur. There are, however, some exceptions. In the Indonesia Irrigation case, the report points out that where there were increases in rice production under the project, most of that production did not reach the market, thus precluding increases in employment from agricultural processing-related industry. Similarly, the Bolivia Electrification report discusses the lack of availability of incentives for industry to locate outside major urban centers, and similar lack of incentives for existing rural entrepreneurs to switch from the generators they already owned to the new grid power. Some of the irrigation reports indicate why it was to the advantage of owner-cultivators to increase family labor rather than to hire labor.

Essentially, it may be concluded from these examples that employment effects, if they are to be significant outcomes of projects, must be designed into the projects themselves, rather than remaining in the critical assumptions section of the logframe. Additionally, there is the question whether local rural employment, if successfully generated, will be sufficiently attractive to reverse tendencies toward rural-urban migration.

Few reports indicate that anticipated reductions in rural to urban migration were achieved by the projects evaluated, as had been anticipated in the designs. In Costa Rica, electrification apparently reduced migration direct to primate cities. However, in Korea, increased on-farm income resulting from irrigation could not counter perceptions that children would be better off with urban jobs, and income increments were invested in education for children to facilitate such a result. In Liberia, as has been mentioned, roads caused both rural to rural migration, as landgrabs forced poorer farmers to move further into the hinterland to find new fields, as well as facilitating rural to urban migration by men in search of work, leaving women with heavier production burdens.

In Jamaica Roads report shows that underlying assumptions of the project as designed -- that improving existing rural roads would lead to increased income and employment locally, which would in turn decrease urban migration and urban crime -- were highly questionable to begin with. The project outcome seems to validate this conclusion. Further, the report indicates that even if employment had been generated locally as a result of roads improvement, local wages would not have been able to compete with urban wages. The Thailand Roads report indicates that roads encouraged farmers to migrate to cultivate new land, while in Colombia and the Philippines, roads encouraged some farmers to return to cultivate land they already owned.

For the water projects, it is very difficult to tell whether the provision of water, or improved water supplies, had any impact on migration. In the Tunisia Water project, the quality of "improved" water supply was so questionable that it was difficult for the evaluators to tell whether any health benefits had been achieved. In the Thailand Water project, beneficiaries apparently perceived significant improvements in quality of life from water supplies, and were

willing to pay for individual, metered service, although they did not drink the improved water by and large. In Kenya, the water study indicates that project participants felt that water supply improved income, health, student performance, and general quality of life. However, whether these positive perceptions were critical in participants making decisions to migrate or not is not indicated.

Migration effects, like employment effects, are the result of complex factors, not all of which can be addressed by a single project even where an attempt is made to design such effects into the project itself. The best that can be said from the results related by the evaluation reports is that the rural development and rural service delivery efforts represented by those projects should be taken into consideration in designing similar projects which are intended to contribute substantially to increasing rural employment or reducing rural to urban migration.

In examining the impact of infrastructure projects on delivery and utilization of social services, the reports overall indicate that new or improved social services do not necessarily accompany infrastructure development. Roads, for example, tend at least in the short term to lead to improvements in access to existing social services, rather than to additional provision of such services. Generally, roads initially improved access to existing health and education facilities outside the road penetration areas, in some cases allowing people to bypass local clinics for curative services in more distant towns that were seen as providing services of higher quality. For electrification projects, results were mixed. In Bolivia and the Philippines, the introduction of power made little difference in increasing the use of existing facilities, for example, by holding night literacy classes at area schools. Nor did they appear to encourage the setting up of new facilities. In Costa Rica and Ecuador, however, improvements or increases in service use were marked. The reports attribute positive outcomes in the latter cases to purposive policies at the national level. In the Bolivia report, the lack of such an outcome is attributed to the relative weakness of the health and education ministries relative to the stronger utilities.

It is possible that for beneficial cross-sectoral impacts of this kind to occur in the social services area, they must be planned from the outset, and probably from the top down, since individual clinics or schools in many project environments do not have the authority to connect themselves up to power lines, or to order appliances that would allow them to benefit from electrification, for example. In general, the reports lead to the conclusion that inter-agency coordination that will lead to effective cross-sectoral linkages and impacts must be planned into the project, at least insofar as sets of highly centralized public sector institutions are involved.

### Introduction of Complementary Infrastructure and Services

Cross-sectoral impacts and complementary infrastructure and services are closely related issues. Nearly all the evaluation reports conclude that single-focus projects are not by themselves sufficient to yield substantial and sustained development outcomes. Even the Colombia Roads report, which goes farthest in questioning this assumption, does so with some caveats. The Korea Irrigation report points out that for greatest impact, irrigation projects require previously sunk costs and concomitant delivery of agricultural inputs and services. The Philippines Irrigation report indicates that the absence of such inputs may lead to project failure. In fact, the report implies that if the farming systems package that was to be provided by the follow-on project had in fact been developed first, and the irrigation infrastructure provided later, project success might have been significantly enhanced.

Most of the reports indicate that complementary inputs and services do not follow infrastructure interventions automatically, even if incomes rise and demand is created. One of the key factors seems to be the ability of beneficiaries to organize that demand and make it felt by local and national level officials. Further, it is not always correct to assume, as the Kenya Roads report points out, that there are extension agents and other inputs available to go in after an area is opened up by a road, for example. Here again, the importance of inter-agency coordination is highlighted.

Electrification projects, to have productive economic effects, require careful site selection, but may also require appropriate credit mechanisms for hooking up, and promotional campaigns demonstrating productive uses of power.

Again, the Rahad project provides something of an exception. In this highly planned intervention, it was anticipated that social services would be provided in all project villages. Due to financial management problems, newer project villages will not be provided with schools and clinics as were earlier villages. In some cases, this will mean that project participants will be leaving locations where they had such services for project villages where they will be absent. The negative effects of such a situation on participants' willingness to remain on the scheme, and to cooperate in the highly directive scheme objectives may eventually be considerable, especially when combined with other problems the scheme is encountering.

For the water supply and health projects, the emphasis is somewhat different. Here, the complementarity question may be more readily addressed in terms of intergration of components in the projects themselves, rather than in terms of complementary sets of projects, or projects that complement more general development strategies. Education components appear to be critical to potable water projects aimed at improved health and sanitation for example, although one report indicates that this should be determined on a case by case basis. In Tunisia, where this was apparently something of an afterthought, effectiveness was lost. In Morocco Food and Nutrition Education, successful impact was critically determined by the introduction of the education component. Training for technology maintenance is also of critical importance in water projects, as it is in other project contexts.

These conclusions, substantiated by the evaluation reports, are significant in an AID environment where there is strong desire to reduce the complexity of our projects. These considerations of complementarity, cross-sectoral linkages and national policies do not necessarily dictate more complex projects, but perhaps more realistic project assumptions, and closer coordination of projects in the same environment, as well as greater interaction between discrete projects and comprehensive host country development policy and strategy. To a considerable extent, this is the function of analysis and strategy at the CDSS level. However, the evaluation reports imply that it must be continued during project identification and design and, to a degree, during project implementation.

### Institutional Capacity

There are several components to institutional capacity in development assistance work. If development/institutional capacity is defined as the organizational means to deliver, maintain, and sustain resource transfers to people in a way that will prove their improved standards of living, the following requirements must be met: the government must be committed in policy, organizational, and resource terms to achieving the planned results; administrative coordination among the groups and actors contributing different input must be achieved; required assistance for beneficiaries to utilize the new resources fully and effectively must be provided; local capacity to promote delivery, utilization, and maintenance of the resources must be engaged; training and supervision needed to make the fullest and most efficient use of the inputs must be adequate and of high quality; and feedback on the successes and shortcomings of the programs must reach those responsible for the programs.

The evaluations found that nearly all the projects suffered from inadequacies in terms of one or more of these variables. None of the project evaluations addressed the question of how information feedback necessary for program modification reached or might have reached decision-makers. In one instance, Senegal Health Care, the impact evaluation itself appears to have initiated program reforms because the team members brought to the appropriate authorities the results of their findings. In several instances, notably in the case of Jamaica Roads, AID project managers appear to have had opportunities to influence program modifications but were not successful in doing so. Failure to make full utilization of local organizational capacity may have had, as one major consequence, inability to put sufficient pressure for program reform upon principal decision-makers at the central level, e.g., in the case of Sudan and Indonesia irrigation projects. The lack of commitment to a long-term course of rural development on the part of the project participants in the Korean irrigation project appears not to have been brought home to the Korean bureaucracy or prompted them to initiate program changes.

The distinction between governmental acceptance of a program and governmental commitment to successful implementation and sustainability appears not to have been drawn in several projects. As a general proposition, the level of commitment to project implementation seems to have been highest in the case of the Asian countries represented in the series: Korea, the Philippines, Indonesia, and especially Thailand. While not the only necessary ingredient of successful implementation, visible or at least discernible host government commitment seems to have helped at least get the projects off the ground in the four Asian countries.

Administrative coordination and provision of inputs and services was a serious problem in most of the projects reviewed. Delays, problems of design, inadequate equipment, non-availability of spare parts, credit shortages, maintenance difficulties, in-appropriate disbursement and accounting procedures are frequent laments in the studies. The question arises, therefore, why these shortcomings occurred. One of the main problems may have been failure in the project preparation and implementation strategy formulation stages to look beneath organization structures to the patterns of influence and the working hierarchy of interests pursued within these structures. Organizations are almost always something other than they appear to be. From this perspective, administrative failures need not be attributed to venality, indifference or incompetence.

These unfortunate problems, from a development assistance standpoint, may conceal other deeper problems identified by asking such questions as: (1) in whose interests is it to implement the project as designed; (2) where does provision of given inputs/services stand in the working internal priorities of the implementing departments in question; (3) how are decision-making agendas set; (4) in what areas and for what reasons is interdepartmental coordination in the interests of the departments involved, for what reason is it not in their interests, and how can the perception of those interests be influenced. Host country projects compete for priorities, and their proponents lobby to influence perceptions of interest. Why should foreign assistance projects implemented with the cooperation of host country ministries be in a dissimilar position? In the Philippines, coordination on irrigation between the older National Irrigation Agency and the newer FSDR was made difficult by the fact that the latter was a superimposition upon the "turf" of the latter and represented newer technologies and the perspectives of younger professionals. Was the FSDR politically strong enough to ignore NIA? If not, were there ways of designing the programs so as to accomplish the neutrality if not the cooperation of NIA without adversely affecting the interests of the project participants?

In the Kenya projects, it was not clear whether the constituencies to be served by the projects were those to which the GOK was and remains beholden. Pricing, marketing, credit structures, and commercial regulations do not favor bringing new groups of producers or new areas of economic potential into producing at the expense of existing ones already linked to these administrative support systems. To what extent have the services required for the roads and water projects been delivered "inefficiently" because it has not been perceived by key bureaucratic actors as in their interests to modify such administrative

practices in order to improve project efficiency? The GOK might be more interested in attracting development money to the country than in promoting the kinds of development envisaged by the projects in the ways they envisage. The Government of Morocco, by contrast, demonstrated its political commitment to the Nutrition Project and also ensured the dedication of the nutrition counselors employed in the project by picking up the administrative costs, advertising nationwide for volunteers selected very competitively, and by providing training opportunities for those chosen using AID development assistance monies.

Engagement of local organizational capacity, and its reinforcement by appropriate supervision and training, proved to be a critical dimensions of success in the projects reviewed. Rahad Irrigation failed in part because excessive centralization under the Rahad Corporation caused provincial authorities to believe that their responsibilities had been transferred to the center, resulting in a negative impact or net disengagement of local capacity. Similarly, existing management capacity at the local level was not recognized or employed in the Indonesia irrigation project. Trainers and supervisors with backgrounds deemed inappropriate locally helped to influence the negative consequences of the Tunisia Water project. Inadequate promotional work was a problem in the case of Liberia Roads and the Ecuador and Bolivian electrification projects.

#### Technical Assistance and Technology Transfer

Technical assistance is not a major focus of these impact evaluations. Relatively few consider in any depth the nature, quality, forms, uses, problems, and strategies of technical assistance. This omission in the reports and, presumably in the project design and implementation processes themselves, is particularly striking in conjunction with the relative lack of attention given the appropriateness of the technology introduced. Very few of the studies report any attempt within the projects to assess the question of appropriate technology. To a surprising degree, therefore, the project participants have been left alone to cope as best they can with the technologies and with their governments' implementation approaches with relatively little assistance from AID. There is frequent reference to the presence of contractors but relatively little to the way in which they worked or might have worked better.

Technical assistance in the form of training and supervision often did not accompany the installation of new equipment or technology, resulting in problems of maintenance, implementation, effective utilization, and/or local acceptance. An exception is CATIE where the while purpose of the project was to provide a new and more appropriate form of technical assistance to Central American agricultural research institutions and ultimately, to small farmers.

Three projects involved local private sector contractors: the Liberia, Jamaica, and Honduras Roads projects. In Liberia local contractors did not appear to have been greatly strengthened by their connection with the project. In Jamaica, a number of the contractors went broke. In Honduras, the experience was positive, apparently because the public sector implementing institution was well able to handle the project. In none of these projects was technical

assistance provided to the local small contractors. In Liberia and Jamaica it might have been possible to strengthen the local contracting industry through provision of technical assistance, although the main problems appear to have been financial ones caused by payment delays and inflation. Private sector-to-private sector technical assistance, currently being explored in AID, might have been beneficial in these projects though this would not preclude the necessity for appropriate technical assistance to public sector institutions using private firms to implement projects. In many instances both kinds of TA may be required for maximum positive impact.

A further issue is the relative merits of private voluntary organizations as against other types of contractors in implementing development assistance projects. The Sierra Leone roads report indicates that the use of a PVO as a contractor provided additional development impact, yet the same PVO in Tunisia apparently chose to act strictly as a construction firm. The implication is that a PVO strategy should be examined case by case, and not just the strengths and weaknesses of the firm in the abstract, in deciding how to proceed. PVO technical assistance received high marks in the Morocco Food and Nutrition project but, taken together, the studies allow no firm conclusion about the relative suitability of PVO technical assistance in particular circumstances. Evaluations should give more attention to the appropriateness of contractors in the future where possible, especially as AID becomes increasingly dependent on intermediaries of all kinds. In addressing this issue, teams should be careful to assess exactly what forms of assistance the contractor is being asked to provide. If we are to understand something of the comparative advantage between PVOs and other intermediaries in given circumstances, we must be sure what we have asked for in the past, as well as what we should ask for in the future.

A range of physical and institutional technologies have been transferred in the projects evaluated. Kitale Maize, the longest of the AID interventions included in this sample, did well in transferring a simple technology, but its dissemination was largely done by a private sector Kenya firm. While the report concludes that the technology proved fortuitously adoptable by some smallholders, it also indicates that other, more appropriate technologies could have been pursued -- including some that would have been more accessible to more smallholders. It is of interest that while the technology transfer under this series of projects was effective, the complementary institution building attempt was a failure.

From the hand pumps of the Tunisia Water project to the information system of the Jamaica Roads project there was a broad range of technologies introduced, and a broad range of results from clear success to evident failure. While the studies give great attention to questions of maintenance, they do not give sufficient consideration to whether the technologies themselves were appropriate, and why or why not. In some instances, higher technologies appear to have been successfully introduced, as in the diesel pumps in the Tunisia water project, while simpler technologies such as the hand pumps for "improved" wells, largely failed. Interestingly, local organizations were formed to charge fees for pump maintenance in diesel sub-projects, indicating greater durability. Teams should be

encouraged to examine the causes and patterns of successful technology transfer given the level of the technology. Inquiries into the ways in which transferred and indigenous technologies can be blended, as in the case of CATIE, should become the rule rather than the exception. Where it would be helpful, studies on the history of technical assistance under older projects can be commissioned as has been done for the new EARIS Egypt evaluation.

### Project Design, Approval and Implementation

#### Design

Many of the reports indicate that critical assumptions made in the project papers were either inaccurate or overly optimistic, both in terms of timing of inputs and outputs and in terms of overall objectives. Positive impact was achieved despite these problems in many instances, some of these benefits being quite unanticipated, while in other cases unanticipated negative results also occurred. Generally, the studies suggest the conclusion that AID must improve the accuracy and realism of project assumptions and designs. This is difficult to achieve where a project paper is essentially a "sales pitch" for a set of decisions already reached within the mission and with the host country concerned. It is also difficult given current life of project horizons since claims for positive outcomes must be asserted for a five year time span which are unlikely to result until ten years or more have passed.

Past of the solution to the problem may be increased decentralization of project development and approval authority to the field, and extending the life of projects beyond what is currently de rigueur. But a key factor is improved pre-project and project analysis of economic, social, and institutional factors as well as national level policies, the need for which is reiterated in almost all the studies. Some of this analysis should flow from that done for CDSS preparation. Improved CDSS analysis should allow improved planning for subsequent project identification and design. Yet, there must be flexibility for taking account of changing country situations. Additionally, overdesign at the project level does not allow sufficient flexibility for beneficiary participation and mid-course correction during the processes of implementation.

Generally AID does not lack analytical capability though this has been weakened in some critical areas through secular trends of staff diminution, e.g., in some agricultural specializations. The problem may lie with the deployment of analytic capability both in AID Washington and in the field. There is also a problem in that analysis is often seen as something necessary to sell a project which, once approved, needs no further consideration. If it is the case that AID places too much emphasis on project design and approval, change in these processes must not result in de-emphasis of the critical importance played by social scientific and technical analysis in successful design work. If missions are given more latitude in project development and approval, they should also be given increased resources to perform the kinds of empirical analysis best done at the field level, by shifting analysts to the field and/or by providing a core staff in AID Washington that can supplement field analytic capability as needed.

### Implementation

Some reports discuss implementation problems although many do not. The problem of delays is mentioned very frequently along with problems attributed to insufficient understanding of host government capabilities to implement projects as designed. Some reports suggest that phasing of project inputs requires more attention than in the past. Just as implementation as a set of processes has been given relatively short shift in AID as a result of the emphasis on obligating funds, so analysis of implementation problems, possibilities, practices, and strategies has been given little attention. New emphasis is needed on monitoring and on-going socioeconomic analysis during implementation as well as continuing assessment of host country institutional capacity and development.

Flexibility in mission funding should also include the possibility of greater overt flexibility in implementation, including phasing project inputs on the basis of on-going analysis and evaluation and greater utilization of mid-course project corrections. In an umbrella project for agriculture or rural development, for example, missions should be able to decide on the basis of evidence during implementation where and when it is appropriate to put in an improved credit scheme, train extension workers, or put in a road. While informed estimates must be made at the outset in order to allow for needed lead time for project inputs, not all decisions concerning when and how to introduce inputs can be taken a priori. Especially is this true if processes affecting and affected by beneficiary participation are taken into account. As has been noted, one example from the impact evaluations is the case of the Philippines small scale irrigation project. Had the farming systems component been developed first and the irrigation system put in later, positive impact might have been substantially enhanced. Similarly, a number of the road project studies indicate that complementary services and/or infrastructure are needed at different times in different environments. In some instances changes in marketing policies must be made before a new road can lead effectively to increased production, while in others land tenure reform or titling may be required to ensure that negative impacts do not result.

Lengthening the life of project should be also helpful in resolving problems arising in seeking realistic project design and implementation. A variety of studies and analyses have indicated that AID should be prepared to lengthen project life in order to achieve the institutionalization of development benefits, especially in the agriculture sector. Projects should, then, include provision for flexible phasing of project or sub-project inputs over a longer time horizon. Not all projects, however, need be of the umbrella type nor is program or projectized sector assistance always the best alternative. There may well be cases where mitigating a single constraint in a single, relatively short, targeted project can be accomplished, e.g., Colombia Roads. However, the majority of the evaluations indicate that such cases are distinctly in the majority.

### Improved Social and Institutional Analysis

Most projects evaluated were designed before social analysis was required for each AID project. Only one impact study (Liberia Roads) refers to a social analysis. One of the most compelling arguments for further emphasis on advancing AID's capacity for social and institutional analysis is to be found in the contrast between the apparent failure, on the one hand, to take social and institutional factors into account in the design stage of these projects and the quality, on the other hand, of such analysis ex post facto in the impact studies despite the limited time the teams were able to spend in the field. The evaluations suggest strongly the need for taking account of improved social and institutional analysis ex ante -- including baseline data collection -- so that the kinds of insights generated by the impact studies can shape project design to avoid the pitfalls found by these studies. AID is at the present time considering an experiment with social and institutional analysis at the strategy formulation stage, so that more informed choices can be made among potential projects and more successful projects designed and implemented.

In our view these twenty-three impact evaluation studies suggest implicitly the presence of five underlying assumptions shaping existing project design work that need to be modified, modifications that could best be accomplished through greater reliance on social, economic and institutional analysis in earlier stages of the project process.

1. "Multiplier Effects" - As has been noted, projects reviewed by these studies appear to have been based on the assumption that project inputs would by themselves set in motion broader changes in income generation, employment, access to services, mobility, etc. Such an assumption appears to have been valid in circumstances where major reforms occur, e.g., land reform in Honduras and ending community isolation in Colombia through the roads project. The assumption appears not to have been valid in the majority of project circumstances where neither the inputs themselves were intrinsically comprehensive in their impact nor were such inputs supported by comprehensive programs. In fact, the constraints standing between project inputs and spiralling positive impacts have become more burdensome as a result of some projects, e.g., in the Philippines and Indonesia Irrigation projects and the Liberian Roads project where land tenure-based inequalities were reinforced. In other instances, such as the Kenya projects, marketing, transport, pricing and credit constraints have frustrated attempts by project beneficiaries to capitalize on their gains. Part of the solution may be to focus more directly on the ways in which such socioeconomic processes are in fact likely to interact with project inputs in terms of the specified goals of intervention.

2. Policy Legitimation - The studies suggest broad project reliance upon an only partially valid assumption that the host governments want to achieve the same results AID does for the same reasons with the same degree of single-mindedness. The Thailand projects achieved some of their success because

of the political commitment of the government to the northeastern region for reasons including, but not necessarily synonymous with, those of AID. The clear commitment of the government of Korea to irrigation development through rice subsidies for both producers and consumers and the determination of the Government of Honduras to effect land reform and give legal standing to cooperatives contributed greatly to the degree of project success achieved in those countries. In several cases, however, the congruence of interests between AID and host country governments was more tenuous. Short term political glorification was clearly a factor in the Sierra Leone roads project with which longer term objectives were in competition. Unresponsive bureaucracies, as in Kenya, or indifferent ones, as in Liberia, may have been such not through venality, indifference, or incompetence but because other interests, and pressures claimed higher priority. Perhaps it is the case that insufficient policy and institutional analysis has preceded project approval for AID to be able to anticipate with any degree of confidence whether the degree of importance the project is likely to command is commensurate with the requirements to be placed upon the host government.

3. Beneficiary Commitment - The studies suggest a prevalent assumption in project design that project participants will embrace wholeheartedly the inputs planned in the manner in which they are delivered. One of the benefits of participation by local people in project design and implementation is that it provides a means to gauge beneficiary response to project activities and a venue for making appropriate adjustments. Tunisia Water, Kenya Roads, Indonesia Irrigation, Liberia Roads, and Philippines Irrigation are all instances where effective use of participation in this way might have led to realization of project pitfalls in advance of implementation and, therefore, to projects with more positive impact and greater cost-effectiveness. Very little in the project development process appears to institutionalize dialogue with project participants concerning project design and implementation issues.

4. Undifferentiated Impacts - In our concern with assisting the poor majority, projects may have been premised too heavily on the assumption that the interests of the poor are undifferentiated. Too little recognition may have been given to the fact that projects addressed to the conditions of poverty in a given setting may affect some elements of the poor more favorably than others. For lack of a specific agricultural labor policy, the Rahad Irrigation project in the Sudan appears to have adversely affected the interests of agriculture wage labor while helping those who were able to acquire tenancies. In the same project, the poor from the northern and southern regions suffered different forms of deprivation prior to joining the scheme. While Rahad's financial management was inept, it was not clear that the project was even in principle fine-tuned to meet the distinct requirements of people from these different regions of the country.

Moreover, the same project may help and hurt a given element of the poor at the same time. In several projects it appears to be the case that women may have gotten greater access to income while simultaneously acquiring a larger proportion of the more onerous cultivation responsibilities without increased partici-

pation in decision-making. More attention to social analysis in the design stages might have uncovered such likely consequences of project delivery so that unanticipated undesirable effects might have been mitigated and serendipitous positive results specifically encouraged.

5. Formalism - Virtually all the studies have recorded disappointments with institutional performance and have been relatively silent concerning the uses to which technical assistance might have been or was utilized to attempt overcoming institutional deficiencies. The Liberia and Jamaica Roads projects stand out as exceptions to this generalization in their detailing of ways in which technical assistance might have been employed to mitigate unfortunate project results. The Liberia project study in particular points to the importance of viewing institutions not in formal, structural terms but as composed of distinct individuals and groups seeking different objectives, collectively defining organizational purposes distinguishable from those mandated, establishing roles and exerting influence in behavior of competing interests, and finding ways to resolve and broker differences. We suggest that only if institutions are studied with these and other more empirical and unformalized patterns of behavior in mind, will it be possible to strengthen institutions. Training, supervision, and advisory roles in institutions must be geared to influencing organizations as they are and not as they seem on paper. To adopt this position is to encourage not only more institutional analysis but to counsel a more frankly political and sociological perspective than is currently fashionable in AID or other donor agencies. The understandable impatience with institutional performance in less developed countries has contributed to a new emphasis upon better management. But the premise of such managerial improvement from this perspective must be not the possibility of factoring out or ordering away these universal characteristics of organizations, including those of donors, but rather understanding them and learning how to cope with and influence them. Managers, in short, need to be skilled diplomats in the best sense of that term.

#### Conclusions and Recommendations

Overall, the impact evaluations reviewed here have revealed a good deal about project impact, and also - if sometimes by indirection - the state of the development process at the time the projects were carried out. Especially when the time constraints of field work, and the space constraints of writing up are considered, they are remarkably informative, and frequently insightful. In making recommendations for improvements in future evaluations, we have tried to keep these constraints in mind. In making recommendations for improvements in project design and implementation, based on our assessment of the evaluation findings, we have allowed ourselves somewhat broader latitude, but have still attempted to be realistic.

## Recommendations

### A. Project Design, Implementation and Operations

1. Increased attention should be given in the project design process to the actual social, economic, political and administrative processes at work in the project environment, and to consideration of how inputs may be predicted to interact with those processes in achieving project objectives. This may involve experimenting with new modes of social, economic and political analysis that will be sufficiently cost-effective and short-term to suit AID's needs, but still be reliable by professional standards.
2. Increased attention should be given to developing implementation strategies that take account of likely obstacles to achieving project objectives, measures to be taken to overcome them, and ways of coping with constraints that continue to be intransigent.
3. Increased attention should be given to understanding and/or influencing the interests of anticipated participants in the project-stimulated development processes.
4. Consideration should be given to lengthening project life to facilitate pre-project analysis, and to allow sufficient time to realize intended outcomes, perhaps by shortening the time it takes to contract for implementation.
5. Increased attention should be given to the nature, uses, and influence of technical assistance in projects. Technical assistance, even in projects whose emphasis is substantially in infrastructure development could also include social science expertise, as well as expertise in agriculture, engineering and related fields.
6. In designing projects, increased attention should be given to assessing the fit and linkages between the interests of host country planners and implementing agencies and those of anticipated beneficiaries.
7. Increased attention should be given in project design -- and in implementation -- to the relationship between anticipated project activities and the comprehensive development strategies and national-level policies to which the host governments are committed so that implementation of AID projects will be supported by other necessary, complementary activities.

### B. Future Impact Evaluations

While we commend the results of the impact evaluations we have assessed in preparing this report, we have several recommendations to make for possible improvements, bearing in mind the time and cost constraints characterizing the impact evaluation exercise.

1. Teams should assess the congruity between issues raised in project social analyses and impact issues found to be of significance in the evaluations. The evaluation exercise provides an ideal opportunity for assessing the quality and utility of social analysis at the project level and the extent to which, had project issues raised in such analyses been taken into account in final design and implementation, more positive project impact might have been achieved. It provides the opportunity to indicate what additional or different social analysis issues should have been raised in project preparation. The quality and relevance of economic analysis should also be assessed. Was economic analysis done properly; was it correct, and why or why not? What guide project design or work to fit the project objective?
2. Teams should give more attention to both the appropriateness and inappropriateness of technologies provided under projects evaluated and the costs associated with each. Of particular interest are cases where an apparently "inappropriate" technology seems to have worked, leading to an understanding of causes for such apparent incongruities which would be informative for future technological choices.
3. Teams should, wherever possible, give increased attention to environmental impacts of projects evaluated.
4. Some of the more recent evaluations have arranged for surveys to be carried out in advance of the team's arrival. This is a trend that should be encouraged. Questions in such surveys should as much as possible aim toward eliciting information about actual behavioral changes resulting from the project as well as attitudinal factors.
5. Where possible, more attention should be given to project management. Alternatively, given the heavy scopes for impact evaluations as they already exist, PPC/E might initiate a separate selective set of project management impact assessments. Here, the use of AID direct-hire personnel is problematic; while they have the best understanding of the problems confronting project managers in the field, they may also encounter significant conflicts in criticizing the performance of peers and colleagues.
6. Teams should give greater attention to the institutional capacity and institution-building aspects of projects, and to the role of technical assistance. Where there was technical assistance over a long period in the past, retrospective "histories" can be compiled, as has been done for the Egypt EARIS evaluation. Where there was no technical assistance, teams should if possible assess whether technical assistance would have been beneficial and if so, of what kind, and provided to which institutions at what level(s).

7. Increased attention should be given to economic analysis in impact evaluations, particularly the costs of projects and the costs per beneficiary. The losses associated with environmental degradation, lost crop land (say, due to damming) or longer distances to markets (due to new road construction) should be estimated. The longer-term, often post-project (recurrent) costs need to be assessed both in terms of the country's opportunity cost of other development projects and of the project's long-term foreign exchange demands.

ANNEX A

ECONOMIC ANALYSIS IN IMPACT EVALUATIONS

JULY, 1981

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PPC/PDPR/HR

ECONOMIC ANALYSIS IN IMPACT EVALUATIONS

The Impact Evaluation series provides a useful summary of AID projects, providing a good, judgemental review of project quality, and highlighting the major weaknesses and strengths of these projects. A missing factor in some of the evaluations is an adequate assessment of economic issues. Despite time constraints and inadequate data, greater consideration of economic issues may be both desirable and achievable. In some instances an economic approach would have enhanced AID's understanding and knowledge of the project's impact and, most importantly, helped to determine how worthwhile an expenditure it was for AID.

A fifteen page description of a 5 to 20 year old development project cannot satisfy all demands and cannot possibly include the indepth analysis of the social, economic, political and cultural factors we all feel are essential if a full evaluation is to emerge. Indeed, where any of these areas appeared critical to the success or failure of the project considerable space was devoted to exploring the reasons for it. We should also note that efforts were made to ensure an interdisciplinary team, and almost all of the teams included an economist. Unfortunately, economic reasoning was not always brought to bear.

The June 9, 1981 meeting on the economic analysis contained in the impact evaluations generated a great deal of controversy over the nature of the economic analysis that could or should be required. The only general concensus was that a more analytic approach might be desirable. Expanding the guidance substantially or stipulating quantitative analysis was rejected most vehemently by those economists who had participated in impact evaluations.

Realizing that we don't live in an ideal world and that the impact evaluations necessarily involve multiple objectives, some modest modification of the format could be introduced to encourage more economic analysis. The general guidelines do suggest examining "foreign exchange shortages" (p. 35), "economic and social costs" (p. 37), and "the potential burden of the recurrent costs" (p. 39). The relevance of any of these guidelines is purely a function of the project, and their application is likely only if the team places a premium on economic reasoning. Additional guidance is required, however, to ensure more explicit attention to benefit/cost issues, for the purpose of identifying (and preferably quantifying) the relevant costs and benefits.

Part of the difficulty in encouraging economic reasoning includes: (1) the necessarily general report outline; and, (2) the stated object of the impact evaluation exercise. The unique characteristics of the various areas/sectors selected for evaluation (e.g., roads, water, education, etc.) make general guidance essential, but at the same time such guidance is open to interpretation, and application is a function of team discretion. In addition, the main focus of the impact evaluations is to identify "change brought about by projects," as opposed to determining whether the project was a worthwhile investment and an appropriate blueprint for future efforts. The latter question forces a more analytic approach and specifically addresses the costs involved and the cost benefit relationships often overlooked in the impact evaluations.

Increasing the amount of quantitative analysis while ideal makes little sense given the dearth of data, the 3-4 week time frame, the necessity of space constraints and the range of expertise on each team; however, encouraging teams to cost out the project can be done. Of course, the precision and extent of analysis will vary, but establishing a thorough cost and benefit analysis as an integral part of the impact evaluations will ensure a minimal economic assessment of projects.

Essentially the impact evaluations should attempt to determine fully 1) costs, including non-quantifiable costs; and, 2) benefits, including the gamut of positive impacts affecting sectors, and those unanticipated in the project design. Many of the benefits are nonquantifiable and the impact evaluations generally addressed these. Topics covered in the core of this paper, such as participation, are cases in point, but benefits go beyond this. For example a road may or may not have an impact on family income, but it probably will benefit communities by increasing access to education and health services, and increasing employment opportunities. If the latter effects are not considered, the full benefits will not have been identified and the cost benefit ratio will imply a poor investment. And this narrow example can be extended to other impact evaluation topics.

It is not difficult to calculate total direct costs and the costs per beneficiary, where some data are available, and such information gives us a better idea of whether the program was worth the investment and if similar projects are affordable. 1/ For example, a hospital may provide sound, extensive health services; but such services are extremely costly, especially in comparison with other means of health delivery. Although extreme, such an example points up the problem of assessing the quality of both a specific project and a sectoral approach without assessing relative costs. 2/ In effect the benefits are described but the costs are not.

1/ For example, the CARE/Sierra Leone Rural Penetration Roads Project did estimate costs and assess the relative costliness of AID's project, and a few others have as well, but this is not the norm.

2/ A good example of this is the "Morocco: Food and Nutrition Education," which although an excellent evaluation, neglected to specify the cost levels. The full range of benefits was identified, we know the project worked and it appears to be a good approach, but without a better notion of what such quality costs, we can't say how it ranks vis-a-vis other workable nutrition interventions.

In addition to direct costs, we need an estimate of the (positive & negative) externalities costs of our projects, for example: 1) land lost to production due to dam construction; 2) the lost employment in substitute industries with introduction of new industries, or the lost output from polluting fishing waters (through other development projects), or 3) the economic loss associated with building a bridge or road which circumvents a market center. The negative side effects of projects are part of the full cost of the intervention and should be part of the implicit cost-benefit analysis underlying the impact evaluations. These costs need to be identified qualitatively at the very least, and preferably quantified. Data constraints may limit examination of costs, but the negative benefits cannot be ignored for lack of data.

Implicit in the cost analysis is consideration of the operating and replacement costs of the project once AID support has been terminated. If those costs have a large foreign exchange component or are expected to place a significant strain on the government budget once AID support has ceased, then the usefulness and sustainability of the project may be undermined. <sup>3/</sup> Examining the extent of recurring costs and the means built in to meet those costs (i.e., financing mechanisms) is essential if projects are to be meaningful development investments.

Related to assessment of benefits, costs and projections of recurrent costs is a critical assessment of the original cost benefit or cost effectiveness analysis. Because the impact evaluations are so important to future project design, evaluating the accuracy and usefulness of the project's economic rationale is highly desirable. <sup>4/</sup> If such project analysis appears to be largely pro forma, or serves as an unrealistic but effective "proof" of project soundness AID guidelines may result in costly projects with few benefits or projects whose objectives could easily have been accomplished through less expensive but equally

<sup>3/</sup> In a few evaluations, such as "Philippine Small Scale Irrigation" the debt and credit issues the farmers would face over time were addressed, and the long term economic issues associated with farming system research were taken up in "Central America: Small-Farmer Cropping Systems". Both addressed the implication for long term viability of activities initiated by the AID project, although they did not include estimates of future demands on the government's budget. The "Senegal: Sine Saloum Rural Health Care Project" team, with access to large quantities of sound data effectively addressed both the costs and financing issues; and, "Tunisia: Care Water Project" gave an example of recurrent cost magnitudes but did not tie that to the government's or community's ability to cover these costs.

<sup>4/</sup> "Korean Irrigation," "Philippine Roads," and "Thailand Irrigation" (forthcoming) do include assessments of the adequacy of the original cost benefit analysis. None of the projects chose to address the relevance or role of such analysis in the project approval process.

effective interventions. Since a project's economic analysis is meant to increase the probability of a sound investment, we need to know how effective such analysis is in predicting project success. This is particularly true in sectors such as education and water, the former because the traditional cost benefit analysis may need considerable modification, the latter because objectives may be achievable more cheaply through alternative programs. Essentially we need to know, is cost benefit analysis a useful tool? If not, can it be? And, where cost benefit analysis was not applied could its use have signaled a high probability of failure?

Costs can also be attributable to ill conceived national policies or to uncontrollable external decisions and these deserve attention. The role of central government pricing policies and the access of the target population to credit both involve costs to some segment of the population and are relevant to the total cost estimates which each assessment team should consider. These costs cannot always be quantified satisfactorily, but a clear discussion of the difficulties emanating from such circumstances can help AID to better understand success or failure and to urge modification or abandonment of projects proposed where similar political and economic climates exist. <sup>5/</sup> And, where relevant, changes in the international environment which affect project or community costs should be identified and discussed.

Simply including a thorough description of benefits and a basic cost analysis in the impact evaluations can entail considerable time and space, although in most instances only certain kinds of cost analysis are relevant to a particular project and benefits can easily be tied to the discussions already undertaken in the evaluations. As a summary, economic analysis should include, where appropriate, an assessment of: 1) total direct (financial) costs of the project, broken down by beneficiary or by accomplishment where possible; and a discussion of the relative costliness of the undertaking; 2) externality costs, or those of undesirable side effects; 3) anticipated recurrent cost levels and the expected financial burden on the host government or community over the long term; 4) the quality and usefulness of cost benefit and/or cost effectiveness analysis in project design with the benefit of hindsight; 5) the role of political decisions, regulations, and exogenous factors (e.g., petroleum price increases) in distorting costs and undermining the project's economic impact; and 6) a thorough accounting of direct and indirect benefits across sectors and communities.

Defining economic analysis in impact evaluations as assessments of costs and benefits is a realistic approach given the constraints discussed earlier. Including such guidance to impact evaluation teams assures that both benefits and cost will be addressed and compared, which implicitly encourages further economic analysis.

5/ "Jamaica Feeder Roads" effectively described the economic costs of political chicanery.

IMPACT EVALUATIONS REVIEWED

Published

1. Colombia: Small Farmer Market Access
2. Kitale Maize: The Limits of Success
3. The Potable Water Project in Rural Thailand
4. Philippine Small Scale Irrigation
5. Kenya Rural Water Supply: Programs Progress Prospects
6. Impact of Rural Roads in Liberia
7. Effectiveness and Impact of the CARE/Sierra Leone Rural penetration Roads Projects
8. Morocco: Food Aid and Nutrition Education
9. Senegal: The Sine Saloum Rural Health Care Project
10. Tunisia: CARE Water Projects
11. Jamaica Feeder Roads: An Evaluation
12. Korean Irrigation
13. Rural Roads in Thailand
14. Central America: Small-Farmer Cropping Systems
15. The Philippines: Rural Electrification
16. Bolivia: Rural Electrification
17. Honduras Rural Roads: Old Directions and New
18. Philippines Rural Roads I and II

Draft

The Product is Progress: Rural Electrification in Costa Rica  
Sudan: The Rahad Irrigation Project  
Sederhana: Indonesia Small Scale Irrigation  
Kenya: Rural Roads  
Ecuador: Rural Electrification