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PROJECT PERFORMANCE AUDIT REPORT

MEXICO - INTEGRATED RURAL DEVELOPMENT PROJECT (PIDER I)
(LOAN 1110-ME)

June 30, 1983

Operations Evaluation Department

FILE COPY

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WEIGHTS AND MEASURES

1 hectare (ha)	= 2.47 acres = 10,000 m ²
1 kilometer (km)	= 0.62 miles
1 square kilometer (km ²)	= 0.39 sq. miles = 100 ha
1 kilogram (kg)	= 2.20 pounds
1 liter (l)	= 0.26 gallons
1,000 kg = 1 metric ton	= 0.98 long ton

ABBREVIATIONS

BANAGRO	- National Bank for Agriculture and Livestock
BANRURAL	- National Rural Credit Bank
Banco Agricola	- National Bank for Agricultural Credit
Banco Ejidal	- National Bank for Ejidal Credit
CAPFCE	- Administrative Committee of the Federal Program for Construction of Schools
CFE	- Federal Commission for Electricity
CIDER	- Research Center for Rural Development
CNIZA	- Arid Zones Commission
CONAFRUT	- National Fruit Commission
CONASUPO	- National Company for Popular Subsistence
COPLAMAR	- Commission for Marginal Areas
CVC	- Agreement for Coordination
Distritos de Temporal	- Rainfed Agricultural Districts
EMECAFE	- Mexican Coffee Institute
FIRA	- Guarantee Fund for Development of Agriculture, Livestock and Aviculture, Bank of Mexico
FOIR	- Fund for Rural Public Investment
IDB	- Inter-American Development Bank
INI	- National Institute for Indian Affairs
INIA	- National Institute for Agricultural Affairs
INIP	- National Institute for Cattle Research
M&E	- Monitoring and Evaluation
PIDER	- Investment Program for Rural Development
Presidencia	- Secretariat of the Presidency
SAG	- Secretariat of Agriculture and Cattle
SAHOP	- Secretariat of Human Settlements and Public Works
SARH	- Secretariat of Agricultural and Water Resources
SRA	- Secretariat of Land Reform
SSA	- Secretariat of Health and Assistance
SPP	- Secretariat of Programming and Budgeting

FISCAL YEAR

January 1 - December 31

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PROJECT PERFORMANCE AUDIT REPORT

MEXICO - INTEGRATED RURAL DEVELOPMENT PROJECT (PIDER I)
(LOAN 1110-ME)

PREFACE

This is a performance audit of the Integrated Rural Development Project (PIDER I) in Mexico, for which Loan 1110-ME in the amount of US\$110.0 million was approved in May 1975. The project was fully disbursed and closed in August 1980, extended from the original Closing Date of December 1978.

The audit report consists of an audit memorandum prepared by the Operations Evaluation Department (OED) and a Project Completion Report (PCR), dated March 25, 1982. The PCR was prepared by the Central Projects Department, now the Operations Policy Staff, on the basis of a review of Bank records, an ex-post evaluation of PIDER I carried out by Government, and two country visits in June and September 1981. The audit memorandum is based on a review of the Appraisal Report (660a-ME) dated April 16, 1975, the President's Report (P-1618-ME) of April 28, 1975, the Loan Agreement, dated May 22, 1975, the Government's ex-post evaluation, and the PCR. Correspondence with the Borrower and internal Bank memoranda on project issues as contained in relevant Bank files have also been consulted, and Bank staff associated with the project have been interviewed. Several relevant Government and academic studies were also reviewed.

An OED mission visited Mexico in July-August 1982. Discussions were held with current and past officials from the Investment Program for Rural Development (PIDER), the Research Center for Rural Development (CIDER), the Secretariat of Agriculture and Water Resources (SARH), the Secretariat of Human Settlements and Public Works (SAHOP), the Secretariat of Agricultural Reform (SRA), the National Rural Credit Bank (BANRURAL), the Post-Graduate Agricultural College, the National Fruit Commission (CONAFRUT), the Mexican Coffee Institute (EMECAFE), the Commission for Marginal Areas (COPLAMAR), the National Institute for Indigenes (INI), the Agricultural Trust Funds in the Bank of Mexico (FIRA) and officials in the States of Yucatan, Quintana Roo, Coahuila, Morelos, and Oaxaca, in which project sites were also visited. Discussions were held with project beneficiaries, including sub-borrowers, with other small farmers and agricultural workers, and with municipal authorities.

A copy of the draft report was sent to the Government on January 18, 1983. Comments received from Government are attached as Annex A.

The audit finds the PCR generally accurate with respect to the project's implementation, but differs with respect to the interpretation and/or evaluation of several developments. The audit memorandum summarizes the project and discusses several principal issues important to rural development projects.

The valuable assistance provided by Government staff, as well as the other individuals interviewed is gratefully acknowledged. Their assistance greatly contributed to this report.

PROJECT PERFORMANCE AUDIT BASIC DATA SHEET

MEXICO - INTEGRATED RURAL DEVELOPMENT PROJECT (PIDER I)
(LOAN 1110-ME)

KEY PROJECT DATA

<u>Item</u>	<u>Appraisal Estimate</u>	<u>Actual or Estimated Actual</u>	<u>Actual as % of Appraisal Estimate</u>
Total Project Costs (US\$ million)	295.0	257.0	88
Loan Amount (US\$ million)	110.0	110.0	100
Date Board Approval	05/08/75	05/08/75	-
Date Effectiveness	08/29/75	10/29/75	-
Date Physical Components Completed	06/78	12/79	148/a
Closing Date	12/31/78	08/30/80	150/a
Economic Rate of Return (%) ^b	16/c	marginal/d	-

CUMULATIVE DISBURSEMENTS

	<u>FY75</u>	<u>FY76</u>	<u>FY77</u>	<u>FY78</u>	<u>FY79</u>	<u>FY80</u>	<u>FY81</u>
Appraisal estimate (US\$ million)	7.5	49.2	89.9	110	110	110	110
Actual (US\$ million)	-	21.2	33.6	49.5	72.5	103.5	110
Actual as % of estimate	-	43.0	37.4	45.0	65.9	94.0	100
Date of final disbursement: August 30, 1980							
Principal repaid to 09/30/82: US\$5.94 million							

MISSION DATA

<u>Mission</u>	<u>Date (mo./Yr.)</u>	<u>No. of Persons</u>	<u>Mandays in Field</u>	<u>Specializations Represented/e</u>	<u>Performance Rating/f</u>	<u>Trend/g</u>	<u>Types of Problems/h</u>	<u>Date of Report</u>
Preparation Assistance	06-08/73	4	-	-	-	-	-	09/73
Preparation Assistance	11/73	4	-	-	-	-	-	01/14/74
Pre-Appraisal	02/74	6	-	-	-	-	-	03/11/74
Appraisal	04/74	2	-	-	-	-	-	05/08/75
Follow-up Appraisal	12/74	3	27	-	-	-	-	-
Supervision I	07/75	4	89	-	1	2	-	09/11/75
Supervision II	03/76	1(3)/i	5(33)/i	-	1	2	-	03/24/76/i
Supervision III	07/76	3	39	-	2	2	F,M	09/10/76
Supervision IV	11/76	2	14	-	2	2	F,M	11/25/76
Supervision V	04/77	1	10	-	1	2	-	05/19/77
Supervision VI	07/77	2	20/j	-	1	2	-	07/29/77
Supervision VII	10/77	1	5/j	-	-	-	-	10/29/77/k
Supervision VIII	12/77	4	44/j	-	2	1	M,P	01/19/78
Supervision IX	06/78	2	20/j	-	1	2	M	07/20/78
Supervision X	12/78	3	36/j	-	2	2	M,P	12/22/78
Supervision XI	05/79	5	50/j	R(2),SA,YP,E	2	2	M,P	06/25/79
Supervision XII	11/79	4	56/j	SR,SA,R,S	2	2	M,P	12/17/79
Supervision XIII	06/80	1	8/j	E,R	2	2	P,M	07/31/80
Subtotal:		456						
Completion	06/81,09/81	1	28	E	-	-	-	-
Total:			484					

OTHER PROJECT DATA

Borrower NACIONAL FINANCIERA S.A.
Executing Agency SECRETARIA DE LA PRESIDENCIA
(Planning and Coordination of Implementation)

Name of Currency (abbreviation) Mexican Dollar (Mex\$)

Currency Exchange Rate:

Appraisal Year Average	US\$ 1.00 = Mex\$12.5
Intervening Years Average	US\$ 1.00 = Mex\$20.9
Completion Year Average	US\$ 1.00 = Mex\$23.0

Follow-on Projects:

First	Second
PIDER II	PIDER III
1462	2043
Loan Number	
120.0	175.0
Loan Amount (US\$ million)	
07/05/77	11/06/81
Loan Agreement Date	

/a Calculated from date of Board approval.

/b Incremental Economic Rates of Return calculated for a sample of fifteen microregions.

/c Estimate was 12% when labor shadow-priced at 100% of official minimum wage.

/d See PPAM, paras. 53-58 and PCR, paras. 4.19-4.21.

/e R = Rural Development Specialist; SA = Senior Agricultural Advisor; YP = Young Professional; E = Economist (Consultant); SR = Senior Rural Development Specialist; S = Sociologist (Consultant).

/f 1 = problem-free or minor problems; 2 = moderate problems; and 3 = major problems.

/g 1 = improving; 2 = stationary; and 3 = deteriorating.

/h F = financial; M = managerial; T = technical; P = political; and O = other.

/i Report on two missions combined.

/j Missions combined supervisions of PIDER I and preparation, appraisal (and, after 07/77 supervisions) of PIDER II. 1979 missions included preparation of PIDER III.

/k Back-to-Office Report.

PROJECT PERFORMANCE AUDIT REPORT

MEXICO - INTEGRATED RURAL DEVELOPMENT PROJECT (PIDER I)
(LOAN 1110-ME)

HIGHLIGHTS

Faced with massive, complex rural problems, the Government initiated major new institutions and investment programs in the early 1970's, including a Program for Rural Development Investments (PIDER) which was to channel coordinated multisectoral investment packages to benefit rural poor in selected microregions. PIDER provided funds to existing federal agencies operating in rural areas, seeking to strengthen their actions through PIDER's coordination and supervision. Efforts were to be made to gradually decentralize planning and execution to state and local levels, and to achieve growing beneficiary participation.

The project financed investments in 30 new PIDER microregions and introduced a number of institutional and programmatic innovations to the existing PIDER program, principally an emphasis on productive investments. Project funds financed investments in irrigation, livestock, soil and water conservation, and fruit, complemented by other investments in rural roads, rural electrification, primary schools, health centers, and drinking water systems. Support activities like farmer organization, agricultural extension and applied research, and marketing were also strengthened. Provision was made for a component to monitor and evaluate PIDER's implementation and field impact. The project was one of the Bank's earliest and most ambitious efforts at integrated rural development.

Points of interest are:

- PIDER is controversial as there is some disagreement regarding its achievements and the relative weights to be given in evaluation to different types of achievements (PPAM, paras. 27-30);
- disbursements were complete after an 18 months extension of closing and, for each investment category, close to those projected at appraisal (PPAM, para. 9; PCR, para. 4.01);
- PIDER brought considerable benefit to its target group. Roads improved communication to previously isolated areas, electricity brought lights, refrigeration, TV and powered motors, drinking water eased household work and improved health, and productive investments, especially small scale irrigation projects, increased incomes and employment. Poor farmers frequently benefitted from productive investments even when economic benefits were low because investments were heavily subsidized (PPAM, paras. 10, 19-21, 26; PCR, paras. 4.14-4.18);

- Government impatience to achieve impact, which led to geographic expansion of overall PIDER activities and to rapid implementation of physical works, and a focus on distributional transfers, resulted in insufficient attention to cost effectiveness. The Bank probably cautioned Government too little in this respect (PPAM, paras. 49-51; PCR, paras. 7.02-7.04);
- investment performance is highly variable. A disappointingly high proportion has low economic returns. Better success was obtained with social and productive support investments than with productive investments. Efforts to rehabilitate problem projects are having increased effect (PPAM, paras. 11, 19-20, 59-62; PCR, para. 4.20);
- resistance by implementing agencies to PIDER interference in their activities was intense, making the effort to work through existing agencies more difficult and, in the short run, less positive. A transfer of planning and execution to the state level, under growing authority of the Governor, is improving coordination (PPAM, paras. 45, 99, 101; PCR, paras. 5.01, 5.03-5.07);
- PIDER planning, coordination, and implementing capacity initially was very weak. The project was expected and did contribute to important institutional changes, including increased interagency coordination, devolution of authority to and increased administrative capacity at the state and local levels, and improved planning procedures. These changes should continue to lead to project improvements, but use of large expenditures to bring about institutional change raises questions of efficiency (PPAM, paras. 45, 53, 54; PCR, paras. 5.01-5.06, 8.01);
- emphasis on productive investments was important in the long run to the rural development strategy, but at appraisal, Mexico did not have either the technological or institutional base essential to their successful implementation. Technological, managerial and marketing problems reduced operating returns. Greater attention to phasing, with a more explicitly experimental approach prior to the large-scale expansion of the productive investment component, might have produced better results (PPAM, paras. 55-57, Section III);
- integrated rural developments have wider political dimensions than other agricultural projects. These dimensions are an important source of Governmental support, but also introduce potential allocational distortions (PPAM, paras. 63, 109, 83);
- greater emphasis was needed on human as opposed to physical investment, including farmer training and development of effective community participation. Farmer organization and community participation was limited by organizational weakness in the responsible agencies, political hesitancy, and difficult socio-economic factors at the community level. Increasing resources are being devoted to achieving participation, but the process is slow and more emphasis is merited (PPAM, paras. 61 (g), 92, 94, 74-78; PCR, para. 7.04);

- poor technical assistance contributed to reduced returns on productive investments. Provisions at appraisal to strengthen extension were inadequate. Extension service organization remained poor throughout the project and extension agents were often poorly qualified to work with small-scale farmers. Government is now increasing attention to small farmer rainfed applied research and extension (PPAM, paras. 15, 64-73; PCR, paras. 4.07, 4.08);
- credit was inadequately coordinated with productive investments (PPAM, paras. 79-84; PCR, paras. 4.09, 4.10);
- a useful first step at monitoring and evaluation was taken, but this component did not lead to the systematic identification and improvement of problems expected. Institutional tensions constrained both the evaluation process and use of the results obtained, and some identified shortcomings implied major changes in PIDER's approach for which political mandate was unclear (PCR, paras. 5.08-5.11);
- the ERR, as conventionally calculated, is probably very low. It is a difficult judgement whether inclusion of the substantial intangible benefits (e.g., distributive, institutional, learning, and political) associated with the project would raise the project's summary ranking to an acceptable level (PCR, paras. 4.19-4.21);
- Bank assistance was largely motivated by a desire to encourage the PIDER effort, given the priority assigned its target group, the belief that it could help with PIDER's conceptual and institutional development, and the desire to develop new programmatic approaches toward rural development. Such support was probably merited, but development of more practicable procedures to treat such benefits during project design, implementation and evaluation might yield superior results (PCR, paras. 2.01, 2.09-2.11, 7.02, 7.11).

PROJECT PERFORMANCE AUDIT MEMORANDUM

MEXICO - INTEGRATED RURAL DEVELOPMENT PROJECT (PIDER I)
(LOAN 1110-ME)

I. SUMMARY

Formulation and Design

1. Mexico faced massive, complex rural problems in the early 1970's: poverty and unemployment affected much of the rural population, particularly those living in rainfed agricultural areas, rural infrastructure and social services were lacking, the agricultural growth rate was declining, food imports were rising, and rural to urban migration was high, causing urban congestion. After decades of inactivity, the Government placed high priority on the resolution of these problems. Major new institutions and investment programs were proposed, including a Program for Rural Development Investments (PIDER) in 1973. PIDER, located in the Secretariat of the Presidency (Presidencia), was to channel coordinated and multisectoral investment packages to benefit rural poor in selected microregions. PIDER did not implement directly; it provided funds to finance investments carried out by 14 existing federal and state agencies operating in rural areas, which would work under PIDER's coordination and supervision.

2. In 1973-74, the Government invested US\$133 million to initiate the development of 45 microregions. It planned to open an additional 55 microregions before 1976. The expected cost of the total investments planned for the 100 microregions during 1975-78 was US\$1.1 billion. To help finance 30 of the new microregions, the Bank approved the Integrated Rural Development Project - PIDER (Loan 1110-ME, US\$110 million).^{1/} The total expected project cost was US\$295 million.

3. The project's principal emphasis was on productive investments. To improve income distribution and make the investments financially viable, their basic infrastructure (about two thirds of total productive investment cost) was to be provided free through public grants to collective groups of small farmers, usually ejidatarios.^{2/} Infrastructure was to be created in irrigation, livestock, soil and water conservation, and fruit production and

^{1/} The Inter-American Development Bank (IDB) provided parallel financing (Loan 293/OC, US\$20 million, signed on January 30, 1976) to help finance 15 other new regions.

^{2/} The ejido is the tenancy form under which land distributed under agrarian reform legislation is assigned. The beneficiaries, ejidatarios, have lifelong, hereditary, usufruct rights to ejido land. Although theoretically a collective organization, ejidatarios often work their land individually or form productive groups including only a fraction of the ejido membership.

other minor categories. Investments complementary to the infrastructure were then to be financed by development credits, channeled through the existing agricultural credit system. Beneficiaries were expected to contribute additional labor and materials equal to 10% of investment cost. Prior analysis was to ensure the economic viability of each subproject, in its entirety.

4. The project also provided for activities and investments in support of the productive investments (farmer organizations, agricultural extension and demonstration, marketing, rural roads and rural electrification), and for basic social infrastructure (classroom construction, health centers, water systems and community assistance programs). Effectiveness was conditional on the submission by the Secretariat of Agriculture and Livestock (SAG) of an IBRD approved plan for the provision of extension assistance to PIDER micro-regions. Although not financed with project funds, a semi-autonomous Center for Research in Rural Development (CIDER) was established in December 1974 to evaluate PIDER's implementation and field level impact and, through formal feedback, contribute to improved project actions.

5. The project was prepared by Government, with substantial Bank assistance, during 1973 and 1974. It was appraised in June/July 1974; two follow-up appraisal missions visited Mexico in December 1974 and March 1975. The loan was negotiated in April 1975, approved and signed in May 1975, and became effective in October 1975. The loan was closed fully disbursed on September 30, 1980.

6. The PIDER I project was expected to benefit approximately 1.0 million persons over three years; 120,000 families (750,000 persons) were projected to increase their incomes from US\$420 to US\$1,160 by 1983 and 350,000 persons (some overlap was expected) were to have access to improved rural infrastructure by 1979.^{1/} The project was expected to create 84,000 man years of temporary employment during the construction phase and 30,000 permanent jobs. The main production increases were expected in corn, beans, beef, and fruits and vegetables, of which half was to be marketed and half consumed on-farm. Fifteen microregions plans were completed at appraisal; the remaining 15 were to be submitted for IBRD approval prior to disbursement authorization. Economic rates of return varying from 11% to 23% (average 16%) were estimated at appraisal for six microregion investment packages expected to be representative of the whole 30 microregion project.

7. PIDER included innovative institutional features: (i) reliance on existing agencies for execution, with emphasis on redirecting them toward more effective actions; (ii) use of coordinating committees (both federal and state level) composed of staff from PIDER and the participating agencies to program and execute PIDER investments; (iii) efforts to decentralize planning

^{1/} Appraisal Report No. 660a-ME, dated April 16, 1975, Annex 8, Table 1 (Micro-Region Summary Analysis). The appraisal report indicates these increases were to be achieved with an investment per capita of only US\$197.00. The appraisal figures appear sometimes internally inconsistent.

and execution to state and local levels, and to achieve significant beneficiary participation; (iv) a poverty oriented focus on target groups in specific regions; and (v) efforts to increase returns by use of integrated investment packages.

8. Prior to Bank involvement, PIDER focused on providing rural (especially social) infrastructure through public grants. The Bank suggested several changes in design for PIDER I: (i) emphasis on productive investments to achieve self-sustained rural development; (ii) strengthening several weak agencies providing support services (organization, agricultural applied research and extension) essential to the productive investments; (iii) greater cost recovery to reduce fiscal drain; and (iv) inclusion of credit at the planning and execution stage to improve productive investment technical design (due to skills of and technical criteria emphasized by credit agency staff), and increased cost recovery and beneficiary participation. All of these features were accepted by the Government and were subsequently incorporated into PIDER's operations in other regions.

Implementation

9. The project began about six months later than expected. Subsequently, the disbursement rate lagged about 40% behind that projected at appraisal both because authorized expenditures by Government were lower than expected and because actual investments were below authorized expenditures. Authorized expenditures were lower because part of PIDER's budget was directed toward the opening of additional microregions outside PIDER I, and because of national economic difficulties and a change of government in 1976/77. Actual investments fell behind authorized expenditures because: (i) PIDER's staff was unable to adequately program microregion investments, especially those requiring specific feasibility studies; (ii) delays occurred each year in PIDER budget authorizations due to government procedures (because funds could not be carried from one year to the next, delays greatly shortened the effective work year); and (iii) key implementing agencies were organizationally weak, had insufficient implementing capacity, and/or resisted PIDER's initiatives for bureaucratic reasons. Total disbursements in mid-1978 were 45% the level projected at appraisal. A decision was therefore made to extend the Closing Date by 18 months. This extension was sufficient to permit full disbursement. At closing, disbursements for each investment category were close to that projected at appraisal.

10. The investments completed are set out in PCR, Table 4.2. Principal investments include 687 irrigation projects (averaging 70 ha), 372 fruit projects (averaging 22 ha), 276 cattle projects (averaging 228 animals), 277 soil and water conservation projects (averaging 822 ha), 658 rural roads projects (averaging 7.3 km), 583 rural electrification projects (averaging 2 km), 303 health centers, 1,005 primary school classrooms, and 793 drinking water systems. Other investments, sometimes complementary, were financed through development credit provided to microregion borrowers (PPAM, paras. 79-84).

11. The project was less successful in ensuring that the investments constructed were as productive as expected than it was at physical implementation. Due to planning, coordination, and budget problems, and to agency/contractor inefficiency, works were sometimes of substandard quality or incomplete in some fundamental aspect, and many were initiated and/or redone several times. There is insufficient information on the total Government funds assigned to individual projects, and on the detailed specification of the works completed, to determine precisely the impact of these problems on unit costs, but unit costs frequently exceeded appraisal forecasts.

12. Important institutional changes occurred during the project. At appraisal, PIDER planning and coordination were highly centralized. PIDER central staff was small and relatively inexperienced. Government administrative capacity in the microregions was limited. Few federal agencies had significant activities in these regions and little working interaction with each other. PIDER central staff had to work on the basis of quick fact-finding trips to the microregions, with little local backup. Planning was thus carried out on the basis of insufficient information regarding available resources or community priorities, and many implementation problems could not readily be perceived or resolved. PIDER also had little legitimacy to coordinate or intervene in the activities of the existing federal agencies.

13. As a result of the problems faced, Presidencia (PIDER) continually pressed for expanded and more decentralized operating procedures; substantial progress was made in this regard. Coordinating committees containing PIDER staff and federal agencies' representatives were first established at both the central and state levels; these committees functioned poorly at first, but steadily improved with time. Presidencia was replaced by the Secretariat of Programming and Budgeting (SPP) in late 1976 and given expanded functions and powers, including coordinating authority for all federal agencies operating in rural areas. SPP progressively decentralized its operations. Parallel strengthening and decentralization occurred in the participating federal agencies. The state Governors were involved increasingly in PIDER in order to gain their support and authority. PIDER's experience then contributed importantly to a wider shift in responsibilities for the planning and execution of rural investments, including PIDER, from the Federal Government to the states.^{1/} State administrative capacity was augmented.

14. Although SPP central level staff still maintain responsibility for PIDER's overall project guidelines, monitoring and evaluation, the state governors now control investment coordination and implementation (this is the case for an increasing amount of all public investment in rural areas). The SPP state delegate and his staff act as a technical secretariat in support of the Governor, and provide liaison with central SPP. Increased state control promoted greater sensitivity to local needs and improved coordination among participating agencies (because of the authority which Governors can bring upon the latter), but probably strengthened the weight of political criteria in investment selection.

^{1/} The administrative disruptions associated with institutional change sometimes impeded implementation in the short run.

15. PIDER had some success at fostering interagency coordination, but most agencies successfully resisted efforts by PIDER to directly intervene in their activities. It was an important element of project design that PIDER would be able to control and strengthen the actions of participating agencies. Its inability to do so was a persistent obstacle to obtaining the desired field results. The influence of the state governors is expected to lead to improvements in this area; in addition, most implementing agencies are improving their program activities with experience.

16. At appraisal, the Secretariat for Land Reform (SRA) was given responsibility for achieving farmer organization and beneficiary participation. The SRA was institutionally weak and the provisions to strengthen it with project funds largely failed. PIDER turned increasingly to its own staff and to that of the implementing and credit agencies to organize farmers to help identify and design project investments, to seek complementary credit, and to operate collectively the completed investments. Although such efforts were positive, they were too limited in scope to achieve the degree of farmer organization and participation required for best results. However, the experience obtained and, particularly, the emerging consensus that achieving democratic beneficiary participation is essential to rural development efforts, could be one of PIDER's most positive achievements.

17. Primary responsibility for agricultural applied research and extension was given to the Secretariat of Agriculture and Livestock, now the Secretariat of Agriculture and Hydraulic Resources (SARH). Many of the technical packages utilized proved inadequate. Agricultural extension, both on rainfed crops and on specific productive investments, also was less effective than envisioned at appraisal. Partly as a result of PIDER experience, Government is placing greater emphasis on research and extension for small-scale farmers in rainfed areas. With Bank support, SARH is now developing rainfed agricultural districts to coordinate agricultural activities. In many areas SARH is assuming basic responsibility for planning PIDER productive investments.

18. PIDER's innovative character required substantial "learning by doing" for success. Inclusion of a formal monitoring and evaluation (M&E) component was an important instrument to achieve this. The component set an important precedent, and provided for reasonably accurate control over expenditures, but fell well short of expectations in providing feedback on program effectiveness. The M&E component was divided into two parts. PIDER's monitoring activities focused on disbursements rather than on its investments' operational success. CIDER conducted some insightful studies in which it forthrightly identified serious field level problems, but was unable to complete representative studies of project impact. Inter-institutional tension, both between PIDER and CIDER, and between PIDER and the implementing agencies, was an obstacle in the evaluation process. CIDER no longer directly evaluates PIDER, which is expanding its own monitoring and evaluation capacity with Bank assistance under PIDER III.

Impact

19. Detailed and comprehensive information on the impact of specific project investments is lacking. This is a major project failing as it is impossible to assess precisely project successes and failures, and their causes. Information available indicates, however, that despite some outstanding project successes, overall PIDER I economic benefits appear well below those projected at appraisal. (No systematic variation in PIDER operation or impact is apparent across microregions by source of finance, i.e., domestic, IBRD, or IDB.) The audit believes that the ERR, as conventionally calculated, is disappointingly low (PPAM, paras. 102-104). It is a difficult judgement whether the intangible benefits achieved (political, institutional, distributional, and learning) are sufficient to raise the project's summary ranking to an acceptable level.^{1/}

20. Project economic results were highly variable, both across investment categories and across microregions. Results depend on PIDER and implementing staff quality, which vary considerably across microregions, and on the microregion resource base. Political pressures to expand PIDER coverage to a wider number of beneficiaries resulted in the selection of some microregions with little productive potential. Within microregions, investments were sometimes spread thinly and uncoordinated so that the potential benefits from "integration" were lost, but successful integration demonstrated the positive interaction expected. Consistently better technical success was achieved with the productive support investments, such as rural roads and rural electrification, than with productive investments. Roads offered communication to previously isolated villages and sometimes opened important regions to production. But their total benefits depended to a significant extent on the success of the productive investments supported. Coordination, design, construction, and operating difficulties persistently affected the productive investments. About 25% of the productive investments still are not operating, some because of long gestation, but many for technical problems. Of those operating, a high proportion have low economic returns due to delayed start-up, higher than expected unit investment and operating costs, and lower than expected production levels and operating life. They have nonetheless brought benefits and, frequently, identified investment opportunities. Investments worked best when they required skills similar to those already possessed by beneficiaries, and where beneficiary skill levels (education) were higher. The social investments show mixed results. School classrooms and health facilities offered much improved infrastructure, but their benefit depended importantly on their staffing. Drinking water systems were successfully constructed, but maintenance is a serious problem in about one third of the communities.

21. Of the productive investments, irrigation development provided the highest returns and greatest permanent employment. Water was highly complementary to existing resources and skills, and investments often resulted

1/ The Government believes that the intangible benefits achieved offset all costs and make the project highly attractive. See the attached comments on the draft PPAM, Annex A.

in substantial income increase. Usually farmers used irrigation for crops with which they were already familiar, e.g., corn, vegetables, melons, but the potential for higher profits is resulting in more efficient application and selection of higher-value crops. Water development was often essential to livestock and orchard investments, and also resulted in improved drinking water supplies. The identification of groundwater resources brought great benefit to some areas. However, irrigation investments were sometimes left incomplete due to poor investment coordination, wells were drilled which produced insufficient water to justify economically the distribution works which had been constructed previously, water pumps failed from manufacturing error or improper use, and beneficiaries sometimes lacked the experience and training in both irrigation and cropping techniques to achieve their investment's potential.

22. Other types of productive investments were less successful. A high proportion of livestock investments (beef, dairy, pigs and poultry) were uneconomic due to faulty design, producer inexperience, inadequate technical assistance, social conflict, and marketing difficulties. Such investments were sometimes used to provide assistance to communities suffering from severe resource constraints, sometimes without sufficient concern for economic viability. The least successful were beef cattle investments. The technical coefficients achieved were low except where intensive technical assistance was provided, a practice which became more prevalent after 1978. Investment costs were much higher than expected. Long project gestation and low income resulted in loss of beneficiary interest. Dairy investments required more sophisticated management, and posed even greater risk, but provided more employment and a constant income flow when successful. Pig and poultry enterprises were highly dependent on good management; after initial failures, such enterprises have proved successful where substantial external assistance is provided in terms of production, marketing, financial and accounting controls. PIDER has worked to organize individual production units into regional unions which can provide these services and become self-sufficient.

23. Orchard investments are mixed. In some areas, their encouragement has resulted in substantial regional growth. But many orchard investments suffered from poor design, including improper choice of species. In others, a significant proportion of planted trees were lost from lack of producer care during the dry season, due largely to their need to seek alternative income sources while the trees are still gestating. In one region, after initially emphasizing orchard investments, PIDER decided to forego such projects until other investments could build up a viable income base permitting year round beneficiary residence. Orchards worked well in other areas when complemented by investments which produced income immediately. Fruit producers commonly lacked skills needed to achieve high quality fruit output, and suffered from marketing problems, but coffee investments worked well where these served to rehabilitate already existing plantations.

24. Many of the soil and water conservation projects were poorly designed, having little or no production impact, while others were badly damaged after completion when beneficiaries, who failed to understand their importance, did not provide maintenance. Investments sometimes were constructed

in isolation, with no account for watershed planning. Worse results were achieved with terrace and border construction, gully dams, and catchment basins. Reforestation was insufficiently extensive to have significant impact. Subsoiling and destoning successfully converted pasture into crop land in some large areas, resulting in significant increases in incomes and employment, but was sometimes misapplied.

25. The project apparently achieved little effective transfer of new refined agricultural techniques or productive inputs, so the expected major benefits in this category (Appraisal Report, paras. 5.01 and 5.05) did not materialize.

26. The project had a positive impact through numerous intangible benefits. PIDER I was designed to improve Mexico's income distribution and many poor farmers did benefit from project investments. This often occurred even when economic returns were low, because investments were heavily subsidized. PIDER also attempted to change images, particularly those held by rural inhabitants about the Government's commitment to this sector; to change attitudes, particularly those held by Government officials and staff about the importance and potential of PIDER's target group; and also to develop institutional strategies and capabilities, particularly in federal agencies and State Governments. The project did affect positively, in varying degree, these goals. Substantial learning about rural development also has occurred and many of the problems identified in PIDER I are being alleviated under PIDER II and PIDER III. Investment design and ex-ante economic analysis have been improved, construction standards are higher and agency actions are better coordinated. Greater attention is given to beneficiary priorities and to farmer organization, and technical assistance has been somewhat improved. A number of innovative strategies have been developed at the microregion and state level to fit local conditions. These accomplishments should bring improved results.

II. MAIN ISSUES

A. Controversy Regarding PIDER Impact

27. PIDER I, which was a large, ambitious, innovative, and complex project, is a subject of controversy both in Mexico and within the Bank. Some describe it as a path-breaking effort to introduce socio-economic development to Mexico's poor rural regions and, in the process, initiate improvements in Government agency performance and obtain knowledge regarding rural development strategy. Others view PIDER I as an inefficient public works program whose "top-down" efforts to achieve quick resource transfers led to disappointing field impact and too little systematized knowledge or system building. It was probably, perhaps of necessity, somewhat of both. It is difficult in evaluation to determine the proper emphasis on each aspect because there is disagreement regarding PIDER I's actual achievements and the relative weights to be given to different types of achievements.

28. Two principal controversies regarding PIDER I are: (1) how successful was it in terms of actual field impact, and (2) assuming that it was less successful than anticipated in this regard, were its achievements in other respects sufficient to justify the approach taken? The latter issue turns partly on whether there was sufficient learning and institutional development during implementation to permit a successful field impact to be achieved through the follow-up projects, PIDER II and III, but other broader achievements, including those of a distributional and political nature, require consideration. The Government also placed a premium on rapid action and the Bank implicitly accepted this judgement.

29. The audit focuses primarily on PIDER I's field impact. As appraised, this impact was the project's primary goal. This impact is the only standard of achievement which can be tangibly measured. Because there is controversy regarding the nature of field impact, it is important to clarify this to the extent possible. Without this measure it is impossible to understand the tradeoff between the project's size and pace of implementation and its cost effectiveness. Evaluation of the field impact is also the best source of lessons about how to improve rural development efforts.

30. The audit concludes that PIDER I's field impact was substantially less than expected at appraisal. The facts and the reasoning underlying this conclusion are presented and discussed in sections C-G. Were PIDER I's field impact the only criterion of success or failure, the audit believes that the results would be disappointing. The PCR and the Government disagree, believing that PIDER I's field impact was short of expectations, but higher than estimated by the audit.^{1/}

31. PIDER I is associated with numerous institutional developments and other intangible accomplishments. Efforts during PIDER I to bring about institutional change were particularly notable. Measure of these institutional developments is necessarily subjective. This does not make them less real. To the extent that institutional change was directly related to the ability to achieve the desired field level impact, the benefits will become more clear when the results of PIDER II and III can be compared with those of PIDER I. To the extent that the effect of institutional change transcends that dimension, other indicators are required, but are more difficult to obtain.

32. The audit is concerned that the field impact of PIDER I is sufficiently poor that the ability of other benefits to compensate is questionable. It therefore suggests that another development strategy might have resulted in an improved return on project resources. This is discussed in Section B. Both the Latin American Agricultural Projects Department and the Government

^{1/} See PCR, paras. 4.19-4.21, and the Government's comments (especially page 2) on the draft PPAM which are included as Annex A of this report.

again disagree.^{1/} They believe that the benefits stemming from PIDER's institutional impact raise the project's summary ranking to a clearly acceptable level and that the strategy adopted was appropriate. This disagreement may be based, in part, on different expectations regarding what PIDER was to achieve.

33. A full evaluation of PIDER I would require substantially more time and resources, including a much improved data base, than is now available. The audit therefore attempts to lay out the principal issues which merit discussion, draw those conclusions regarding PIDER I's impact which seem indicated by the information available, and also point to the value of further study. The audit memorandum proceeds as follows. Section B discusses the unusual need during PIDER I for a focus on the institutional system which was to implement project investments. This discussion seeks to provide a broader perspective on the tradeoffs faced between use of the institutional system to achieve a viable project, and use of the project to achieve improved institutional functioning. The tension between means and ends was a source of both strength and weakness throughout the project. Section C evaluates the impact of the productive investments which comprised the bulk of PIDER I expenditures and which were expected to carry economically the rest of the project. Sections D-F deal with agricultural applied research and extension, farmer organization and beneficiary participation, and agricultural credit, all of which were importantly linked to the success or failure of the productive investments. Section G considers the performance of the monitoring and evaluation component which was to institutionalize feedback and formalize project learning, Section H estimates the project rate of return, Section I discusses Bank performance, and Section III contains concluding remarks.

B. Institutional Issues in Design, Implementation and Evaluation

34. As noted in the summary and in the PCR (sections V and VI), PIDER I was both an actor in and a contributor to a number of important shifts in the system of public administration. PIDER I also resulted in substantial learning regarding program approaches for rural development, and many Government and Bank staff gained valuable experience which should pay future dividends. The accomplishments mentioned are substantial. The audit finds it difficult, however, to place a value upon these accomplishments, partly because it is still unclear to what extent these will permit implementation of a cost-effective rural development program in the future, and partly because it is difficult to determine how much of the total accomplishments of PIDER can be attributed to PIDER I.^{2/} Nonetheless, an exclusive focus on the cost-effectiveness of PIDER I's field impact is surely incorrect. PIDER was

^{1/} See especially the Government's comments, Annex A, page 1.

^{2/} Two useful studies which discuss PIDER's role in administrative reorganizations are: Eric J. Miller, "PIDER: Institutional and Political Developments in Mexico: 1970-80," The Tavistock Institute of Human Relations, London, 1980, and Merilee S. Grindle, "Official Interpretations of Rural Underdevelopment: Mexico in the 1970's," Working Papers in U.S.-Mexican Studies, 20, University of California, San Diego, 1981.

initiated to engineer a major shift in Government agency priorities and capabilities in a short period of time. Bank support for PIDER I was partially predicated on this effort. Seen from a broad perspective of development administration, it can be argued that it was impossible to bring about a rapid shift without some cost in initial efficiency. The question is one of a tradeoff.

35. The issue of institution building arose in early 1973 when a Bank mission visited Mexico to review new Government initiatives in rural development and to identify potential projects for Bank support. The mission, noting the tremendous domestic pressure for action and also the commitment of the new administration, recommended that the Bank become involved either in the rural roads program or in the integrated rural development program (PIDER). The mission offered three caveats: (a) Bank involvement was high risk given the weak Mexican institutional structure in rural development; (b) a large Bank staff input would be required, if this could not be provided it would be better not to get involved; (c) assistance to marginal areas was important, but was likely to provide only an interim and partial solution for rural poverty--longer-term solutions probably required agricultural and industrial development in other areas, population shifts, and a reduction in population growth. The mission concluded that the Bank's most useful role might be assistance with the conceptual approach to be used (e.g., greater emphasis on achieving farm production gains), and with institution building. The mission also noted that the appraisal justification criteria for such a project would require thought.^{1/}

36. The Government and the Bank preferred that Bank support be for the integrated rural development program. Preparation began with a review of the Government's plans for the latter. The issues raised by the identification mission soon were brought to the fore again. All preparation staff favored support for rural development, but representatives from the Latin America and Caribbean Agricultural Projects Staff were concerned that the strategy being adopted by Government was infeasible. They argued that PIDER's proposed size and pace of implementation was highly optimistic given the expected obstacles. These obstacles included the difficulty of coordinating powerful and largely independent Federal agencies who were unlikely to submit easily to PIDER's intervention, the lack of baseline data on microregions which would make planning difficult, the inadequacy of technological knowledge for implementing effective investments throughout Mexico's diverse ecological and agricultural structure, the problems faced in achieving effective participation from poor peasants who were likely to be skeptical of Government efforts given previous experience, and the possibility that pressures would be great to allocate resources on the basis of political rather than economic criteria. These staff suggested that the Bank discuss with Government the full implications of such a large and complex undertaking, and proposed instead a smaller and more explicitly experimental project.^{2/}

1/ Internal Bank memorandum dated February 23, 1973.

2/ These issues were discussed in internal Bank memoranda dated May 17 and September 21, 1973.

37. A follow-up preparation mission discussed with Government the alternatives for Bank assistance, including a smaller, more experimental project. Six options were then formally presented to the Bank.^{1/} The options ranged from relatively unqualified program support for PIDER (preferred by the Government), to more conditional support for PIDER, to direct support (without PIDER involvement) for several implementing agencies. The latter, sector financing, was a variant of the Bank's traditional practice. It seemed the easiest approach, as the Bank would be working with known agencies, but was expected to work against the coordination sought through PIDER. In turn, the program approach was considered inadvisable because the PIDER microregion documents which had been presented to the Bank were judged inadequate to justify foregoing the usual requirements of appraisal and supervision.

38. Among the alternatives involving more qualified support for PIDER were a smaller project to develop a number of contiguous microregions and a larger project supporting a number of microregions dispersed throughout Mexico and chosen to be representative of Mexico's diverse agricultural structure. The preparation mission argued against the former; it noted that the Bank was already supporting other regional development projects in Mexico, so that such a project would be less innovative, and that a regional project conceived within PIDER would require nearly as great a Bank effort toward institutional coordination and technological development as would more general support for PIDER, but would benefit a more limited area. Both arguments were reasonable. However, the audit notes that a subtle but important change had taken place in the formulation of the smaller, experimental project recommended earlier. The regional project considered was no longer presented as an effort to scale down Government efforts to a more manageable size, nor as an effort to develop specific microtechnologies prior to widespread implementation of investments; it was simply a geographically limited project which was perceived to have less chance of impact on PIDER's overall operation.

39. Why was this change introduced? The audit does not know that there was a conscious choice, but it is clear that the Bank wanted to support PIDER for a number of reasons which transcended the narrow impact expected from the investments financed. These reasons, mentioned in internal Bank memoranda and by staff interviewed by the audit mission, included:

- (a) previous Mexican policy had largely ignored the rural poor and creation of PIDER was considered an important change in government policy. PIDER's target groups were assigned high priority, and PIDER was expected to have important institutional and, perhaps, political impact.
- (b) the Echeverria administration was to end in late 1976, and thus had little time to establish PIDER as a permanent program. The Bank believed broader support might encourage future administrations to continue PIDER.

1/ See the mission's report, dated January 14, 1974.

- (c) the Bank's president had recently spoken in his 1972 Nairobi address of the need for poverty-oriented rural development programs and a new Bank department for agricultural and rural development had just been established to assist in such efforts. The Bank was eager to see new program efforts developed, noted the Government's commitment, and was willing to contribute substantial resources of its own.
- (d) the Government had already initiated PIDER and indicated its determination to proceed rapidly. The Bank believed that it could significantly increase the return obtained on funds invested by suggesting more efficient and effective program approaches. The Bank feared that Government would be less interested in its participation and/or receptive to its ideas if the Bank opted for a smaller or more geographically limited project.

40. It appears that the Bank opted in favor of a large, dispersed project to maximize Bank exposure to PIDER, believing that this would best encourage the overall PIDER effort and also offer greater scope for Bank contributions to this effort. As anticipated by the identification mission, however, the approach taken suggested the adoption of unusual, though not necessarily incorrect, appraisal criteria. The Bank was recognizing that PIDER's institutional framework and technological base might be still inadequate to the task assigned, but using the need for their improvement as an argument for Bank involvement. The project was therefore necessarily risky, yet the general, large-scale approach adopted made it difficult to characterize the project as "experimental." Either this paradox had to be confronted and argued through the appraisal process, or appraisal had to design a project which appeared to have a good chance of succeeding under the "normal" project criteria.

41. During preparation and appraisal, the Bank urged numerous changes in PIDER's design which were intended to strengthen it conceptually and institutionally. Most of the changes proposed were accepted, at least in principle, by Government. The audit believes that the changes proposed were theoretically well founded. But there was a substantial difference between obtaining agreement in principle and obtaining effectiveness in practice, particularly in the short run. A number of the obstacles identified during preparation were not subject to alteration within the time frame available. Some were external to PIDER itself. This problem was not adequately reflected in the appraisal report, as was pointed out in the appraisal review process.

42. One review noted that the Bank was being asked to finance part of an ongoing program (PIDER) involving a relatively large number of institutions which, coordinated by the Presidencia, were expected to design and implement thousands of investments in diverse rural communities. The review agreed that it was impractical to appraise each and every investment and that appraisal of the system, i.e., the institutions, coordination arrangements, and the proposed technology packages for the microregions--which the appraisal report had done--was the most practicable approach. However, the review

questioned whether the system had been realistically appraised. The appraisal report read, it said, as if the institutional system and the technological base were already adequate to achieve, with reasonable likelihood, the desired impact. The review questioned the assumption that PIDER's coordination mechanism was adequate and that the institutions involved would be able to perceive and correct their own weaknesses. It also questioned whether the technical packages proposed for use in the microregions ("to a large extent sight unseen") would be suitable in practice, noting that it would be difficult to obtain big, low-risk production increases under rainfed agriculture.

43. Other reviews also noted that strong assumptions had been made about the economic return to be obtained on project investments, many of whose design were still only vaguely perceived. These assumptions seem to have been hidden rather than exposed. One review stated that the draft appraisal report "makes it all but impossible to have an idea on the economics of the project ... it only deals with maize and beans ... there is nothing in the report to help the reader get an idea of the economics of the project in terms of the relationship between 'productive' investment and additional output...." Yet another review noted that "there is no economic analysis in the report on costs and benefits with respect to the US\$10 million investment proposed (for soil and water conservation)," noted that the agency to be responsible for implementation was "extremely weak" and questioned whether this component should be financed.^{1/}

44. Although limited changes were introduced into the appraisal report as a result of these criticisms, the final report reads much the same as the draft. The clear assumption is that the system will work. Thus, it appears as if PIDER I was approved on the basis that a narrow "project" interpretation of its purpose had been accepted and satisfied.

45. Once implementation began, however, it quickly became clear that the PIDER system, as appraised, was a considerable idealization of the actual framework. Supervision missions pointed to the still fledgeling nature of PIDER's planning and coordination framework, the difficulty faced by PIDER in obtaining legitimacy from the implementing agencies it was to coordinate and direct, the need to improve the budgetary procedures used, the need for improved planning techniques, and so forth. Not surprisingly, Bank supervision found itself involved primarily in organizational issues and unable, at least for some years, to undertake much work with the improved applied research and extension effort considered essential to the success of the productive investments which it had encouraged and which were being implemented (PCR, paras. 7.07, 7.08 and 7.11).

^{1/} The internal Bank memoranda cited were dated January 28 and January 30, 1975. The memoranda originated in the Central Projects Staff, the Latin America and Caribbean Programs Department, and the Latin America and Caribbean Projects Department. Concern was widespread.

46. Whether as a result of need to focus on organization, or from the desire to participate more broadly in the PIDER program, the Bank agreed with Government during implementation that it would be an artificial separation if these 30 microregions were administered differently than the micro-regions financed from other sources. Thus, rather than focus on PIDER I investments regardless of events in other regions, Bank staff sought to work hand in hand with PIDER management on the entire project.^{1/}

47. The approach taken had considerable logic insofar as it focused on problems of great short-run importance and also offered greater potential leverage. But it simultaneously diluted the Bank's input by spreading it over a larger and even more complex area and set of issues. Breadth as opposed to depth of knowledge further encouraged an emphasis on institutional issues rather than on microtechnologies for specific application in the areas it was financing (PCR, paras. 7.07, 7.08, and 7.11).

48. One approach was not necessarily better than the other; the proper choice depended on the resources the Bank could offer and an assessment of where they might have greatest impact. The audit is not certain which was most appropriate. The institutional problems faced were great and supervision missions worked with unusual dedication and enthusiasm to understand and help PIDER management resolve these. They played the role of supportive critic, political ally, and sounding board.^{2/} Their suggestions doubtlessly influenced PIDER's institutional evolution. It was impossible, however, for the audit to determine to what degree ideas and pressures originating domestically would have resulted otherwise in similar changes. Even though supervision maintained unusual continuity during PIDER I, so that mission members developed considerable knowledge of PIDER's staff and operations, the periodic nature of their missions required that they react to rather than act on the continuous organizational changes which events in Mexico produced. And there was great need for more systematic work on microtechnologies, including farmer organization, training, and technical assistance.

49. It must also be emphasized that PIDER's organizational problems, and thereby the need to dedicate effort to them, were exacerbated by PIDER's rapid expansion. From the beginning the Government put great emphasis upon quick action. The number of PIDER microregions increased from 54 in 1974 to 86 in 1976, to 118 in 1979, and to 133 in 1981. Total expenditures rose from Mex\$0.8 billion in 1973 to Mex\$1.7 billion in 1976, to Mex\$5.0 billion in 1979 and to Mex\$10.6 billion in 1981. Increasing petroleum revenues during the 1970s encouraged the Government to expand rather than moderate its goals. That increase, with intensifying concern for rural areas after 1976, also resulted in the development of new rural development initiatives, CVC and COPLAMAR; their expenditures soon exceeded PIDER's.^{3/}

^{1/} PIDER I was appraised to finance 30 designated microregions and the Bank disbursed on this basis.

^{2/} The mid-term evaluation, carried out jointly by Bank, PIDER and CIDER staff, was an excellent effort by Government and the Bank to discuss and analyze PIDER's problems realistically and to seek proper remedies.

^{3/} COPLAMAR's budget alone was US\$1.7 billion in 1981.

50. Between 1973 and 1982, and beginning from an expenditure flow near zero, the Government spent approximately US\$2 billion on PIDER and considerably more than this on other similar projects. It is remarkable that Government was able to build up its implementation capacity to the extent achieved in such a short period of time. These efforts brought great benefit to many rural poor. However, to the extent that concern for efficiency was a priority, a slower effort should have been advised. The scale of effort continually outran the capacity of the system to implement efficiently and the technical packages utilized needed improvement if they were to provide a return normally considered attractive. The enormity of the effort made the potential loss from inefficient action very significant.

51. This history suggests either that the Bank's efforts to encourage PIDER and ensure its continuation were extraordinarily successful (PCR, para. 7.02), or that the Bank may have underestimated the deep Mexican commitment to the effort. If the latter is true, as the audit believes, the Bank might have contributed more usefully by a greater emphasis on a slower, more cost-conscious and, in the longer run, more effective program.

52. The audit believes that the issue is not whether the Bank ought to have supported PIDER, but how such support could best have been formulated. The approach taken during appraisal was probably deficient. The appraisal report did not fully reflect the Bank's reasons for supporting PIDER, nor did it adequately reflect the problems which were likely to be encountered. Had both reasons and problems been reflected more directly and completely in the appraisal report, logic might have called for a clearer delineation of the means by which different objectives could be satisfied and also dictated greater emphasis on experimentation, cost-control, problems of pace and scale, and the like. An alternative project, similar to that suggested during preparation, might have emerged. It sought to achieve a successful project within a more limited context, somewhat isolated from the problems of scale and speed which affected the rest of the project and with an emphasis particularly on the microtechnologies themselves. Had this been implemented successfully, the learning achieved could presumably have had significant application in the broader program. Example is a powerful lever for change. Bank "support" could have been articulated just as forcefully.^{1/}

53. Institutional change necessarily occurs over a long period and its full impact can only be revealed in the future. Many staff who participated in PIDER feel any shortcoming in field impact is adequately offset by its broader accomplishments, particularly the institutional advances made. This may be correct, but the magnitude of problems faced by PIDER merited more attention at appraisal than it received. The conceptual scheme behind PIDER was and is an innovative and attractive idea. But the Bank helped design a project whose design implicitly, but not explicitly, attempted to use large project expenditures as an instrument for increasing government capability.

^{1/} A counter argument is that support for the project was merited, only broad support was acceptable to Government, and, given that the Bank's appraisal process is inflexible, the approach taken was appropriate.

It is an expensive manner by which to create institutional change, and there is the danger that one is always justifying today's imperfect action by the promise of tomorrow's improvement.

54. The project raises two issues relevant for future rural development efforts which merit specific mention:

- What are the appropriate criteria for project selection and evaluation, e.g., what weight should be placed on benefits such as distributional improvements, institutional change, and learning? Equally important, what is a practicable means for measuring accomplishments? These benefits, although intangible, merit inclusion. But they must be handled with some precision if their inclusion is to improve decision making.

- To what extent is it appropriate for the Bank to use the total "incremental impact" due to its participation as an indicator of achievement even if the final rate of return is below a level normally seen as acceptable? For example, if an incremental return was achieved in all PIDER investments as a result of Bank assistance/leverage, is the total "gain" indicative of Bank assistance? Or should the Bank forego such "benefit", for the potentially larger benefit of influencing the Government to undertake a more promising project?

C. Emphasis on Productive Investments

55. When PIDER was initiated in 1973 with domestic financing, almost exclusive emphasis was placed on implementing (through public grant) what came later to be called social and productive support investments. The Government planned to introduce on-farm productive investments at a subsequent stage, along with technical assistance, credit and other associated services. During preparation of PIDER I, the Bank encouraged Government to place strong emphasis on productive investments immediately. The Bank argued that rural development had to be self-sustaining to be permanent, thus requiring a productive base, and that the social and productive support investments also would be more economically viable if they were integrated into a broader design.^{1/} The Government eventually agreed to devote 62% of PIDER I resources to productive investments. This proportion was estimated sufficient to carry the costs of the indirectly productive as well as the productive investments and provide a 16% rate of return (Appraisal Report, para. 6.01).

56. The shift in project emphasis toward productive investments, however attractive in the longer run, caused great implementational problems. The bulk of the project was shifted from strong to weak federal agencies, from operating programs which required only marginal adjustments to those which required fundamental change or initiation, from technologies which had been

1/ The Bank hoped that Mexico would target the rural development effort on those poor regions having substantial agricultural potential, not simply on regions which were poor. The emphasis on productive investments as part of an integrated package had the advantage that it coincided with this thrust.

implemented successfully to those which had to be adapted to unfamiliar circumstances, from investments requiring relatively simple beneficiary maintenance to those requiring more demanding beneficiary operation, and, to a lesser degree, from physical investments to support services. The number of activities in which PIDER was engaged increased dramatically, thereby increasing the coordinating-planning task of PIDER management. These changes increased project risk substantially, and this risk probably received inadequate attention at appraisal.^{1/}

57. The audit believes that it was correct to increase the emphasis on productive investments, which would eventually form the principal element in a rural development strategy, but not to the degree or with the rapidity which was actually done. The issue is essentially one of phasing. Mexico did not yet have an adequate technological or institutional base to permit a widespread productive investment program to be carried out efficiently. The Bank was well aware of existing problems, but expected that they could be overcome rapidly to permit success. It was overoptimistic about what could be achieved in a short time, and insufficiently concerned about the operational implications of failure in any of the specific components (e.g., technology, extension and credit). It thus encouraged a great deal of investment (throughout PIDER, not only in the microregions assisted by the Bank) which had low probability of economic success.

58. Productive investments, as implemented, accounted for nearly 70% of total project funds. These expenditures include the infrastructure financed by public grant (39% of total project funds), complementary investments financed by development credit (17%), and expenditure on farmer organization, extension, and marketing (13%), which were mainly for support of productive investments. The productive investments fall into several broad categories. The proportional importance of each category, as planned at appraisal and as implemented, is shown in Table 1.

Table 1: PRODUCTIVE INVESTMENTS, BY MAJOR CATEGORY

	Appraisal (%)	Actual (%)
Small-Scale Irrigation	17	16
Livestock	10	10
Soil and Water Conservation	5	7
Fruit Production	5)
Beekeeping, Forestry and Fisheries	1)
Sub-total	38	37
Credit	22	22
Cattle and Irrigation	(13)	(n.a.)
Fruit	(9)	(n.a.)
TOTAL	60	59

1/ Concern regarding the riskiness of project design is found in several internal Bank memoranda, e.g., May 17, 1973, September 21, 1973 and January 30, 1975.

59. Information on productive investment impact is available from a number of useful studies and reports.^{1/} These studies are largely descriptive and lack full representativeness, but their findings and conclusions are internally consistent and accord closely with impressions obtained from Bank, PIDER, and implementing agency staff, and from direct field observations, including conversation with beneficiaries. PIDER also twice has carried out an inventory of the operational status of investments from which valuable data is available. The principal results indicated:

- (a) Great variability existed in the impact achieved, both by type of investment and by geographic region. The most successful investment in terms of economic return and permanent employment generation was small-scale irrigation. Soil and water conservation, fruit and livestock investments were considerably less successful.
- (b) About 25% of the productive investments carried out were still not producing anything. PIDER's Planning Division carried out a complete inventory in 1978. Of the 2,063 productive investments, 1,292 (63%) were completed and operating, 629 (30%) were completed and not operating, and 142 (7%) were works in progress. Efforts by PIDER management since 1978 to rehabilitate non-operating investments have been only partially successful. In 1981, when the last complete inventory was taken, of 2,452 productive investments, 1,869 (76%) were completed and operating, 222 (9%) were completed and not operating, and 361 (15%) were listed as unfinished, although nearly two years had passed since Bank records indicated physical completion of project investments.^{2/}

1/ CIDER has carried out more than 50 studies, of varying quality. Several high quality, insightful studies from CIDER include "Evaluacion de los Programas de Riego, Desarrollo Ganadero y Caminos en cuatro regiones-PIDER", Septiembre 1978, and "Informe Final de la Investigacion sobre la estrategia y los resultados del Programa de Inversiones Publicas para el Desarrollo Rural en el Estado de Oaxaca, Region PIDER No. 19, Mixteca Baja", Febrero 1980. An excellent report is that by The World Bank, Rural Development Division, "Rural Development Project (PIDER I), Mid-Term Evaluation Report", August 1979. Bank supervision reports for PIDER I, II, III, and other Bank reports, especially Michael M. Cernea; "Measuring Project Impact: Monitoring and Evaluation in the PIDER Rural Development Project - Mexico", World Bank staff Working Paper No. 332, June 1979, provide important information. Nonetheless, additional detailed, quantitative, representative analysis of economic and social impact is badly needed. Relative to total program expenditures, the PIDER program is significantly understudied. Without clear evaluation, PIDER management cannot identify and correct problems, nor convince other agencies or higher authorities that changes in program design are warranted.

2/ The increase in the number of unfinished projects suggests a reclassification of some projects from completed and not operating to unfinished in the two inventories. Some inventory error may be involved. The data suggest surprisingly little physical progress from 1978 to 1981, despite a substantial increase in PIDER disbursements. The inventories show PIDER had completed 1,921 productive investments by early 1978, or 84% of the 2,091 completed by late 1981. In mid-1978, disbursements were 45% that achieved at closing.

- (c) The production/income impact of a significant proportion of the operating investments is lower than expected at appraisal because of technical/managerial problems.
- (d) The economic return to most projects is well below that expected at appraisal because of higher than expected unit investment costs, higher operating costs, and lower production achievements (including significant production delays).
- (e) Most projects have been operated by groups comprising only part of the ejido to which they belong. This organizational structure has led to concentration of benefits and, in some cases, to internal conflicts within the ejido. It has also sometimes permitted more effective operation of projects by improving management, participation and incentives. Where several investments have been made within the same ejido, the aggregate benefits have been spread more widely and sometimes created healthy competition.
- (f) Employment effects are highly variable but appear close to appraisal estimates of about 30,000 permanent jobs and 84,000 temporary jobs. The productivity of the permanent jobs created is variable. Small-scale irrigation projects generated little temporary employment, but substantial permanent employment, often requiring increases in both family and hired labor. Livestock projects, particularly per dollar invested, generated little temporary or permanent employment. Some conservation projects, like reforestation, generated substantial temporary employment but little permanent employment; others like subsoiling, generated little temporary employment, but moderate permanent employment.

60. The stylized facts presented indicate that PIDER was not very efficient at the field level. Yet tangible benefits were achieved and specific mention of these is warranted. Where investments were successful, the impact of these projects, particularly when combined with social and productive support investments, is encouraging. Permanent employment and income for beneficiary groups rose significantly and became more stable. Men were required to migrate seasonally less frequently, benefitting the community as well as the individual. Beneficiary/ejido organizations often were strengthened and frequently became more democratic. The availability of good drinking water, electricity (lights, TV, and refrigerators), small home improvements, provision of grade school education, improved roads (transportation), establishment of new stores, and access to health facilities provided a much improved quality of life. Where PIDER worked well, the beneficiaries are clearly pleased with the changes which are taking place. Enthusiasm, optimism, and appreciation are evident. Many beneficiaries from successful PIDER enterprises invest a high proportion of their income gains in other, frequently collective, productive undertakings. The urge to progress is clear. Nonetheless, the number of investments which have been a clear economic success is relatively low. The costs of the achievements obtained are high. This is PIDER's principal failing.

61.

Problems affecting PIDER productive investments were numerous. A brief review of the most important problems follows. These did not each occur in every project, but they occurred with considerable frequency.

- (a) Technical design. Taken in its broadest interpretation, technological strategy is perhaps the main problem of the productive investment component. Much of the technology applied is of doubtful appropriateness for the ejido sector. The technology is capital and management intensive; the results achieved are usually sharply affected by small management errors.^{1/} Equally important, however, the technologies employed, regardless of underlying technological strategy, were sometimes badly implemented, e.g., inadequate attention to local climate, improper layout and/or plot location, overdesign of components, omission of crucial components, and unjustified use of high cost materials. Examples: cattle and dairy units with expensive steel and concrete construction, located far from any water source; small dams placed where they would not catch water runoff; pig units lacking drains or water pipes; orchards planted with species which could not live/produce in the ecological conditions present.
- (b) Completion of investment. Implementing agencies and contractors did not always complete an investment or completed it hastily and badly. These problems are similar in effect, but different in origin from those of technical design. Examples: irrigation systems with a distribution canal (although included in the specifications) left incomplete, an irrigation pump was installed, but for lack of a critical part (to be provided by equipping agency), could not be started and used for several years.
- (c) Lack of complementary investment. Frequently, more than one agency was involved in construction, but their specific responsibilities were poorly coordinated so that operations were long delayed. Examples: a livestock unit was built, but the irrigation well to provide water was not drilled for a year (at which time no water was found), an irrigation well was sunk and distribution canals built, but credit was not provided to equip the well with a pump, and/or electricity was not delivered/hooked up to permit operation, a dairy unit was constructed, but credit was not allocated on time to permit purchase of the herd.
- (d) Training and technical assistance. Beneficiaries frequently were provided investments which they had little ability to operate, resulting either in almost total dependence on outside assistance, and/or on poor operating results (including deterioration of the investment and major financial losses). The technological, financial, and marketing aspects of the project often required skills beyond those possessed by the extension agents assigned to the project. Technical assistance often arrived only irregularly.

^{1/} The use of collectively-owned projects, while achieving economies of scale and offering social benefits, exacerbated management problems.

Examples: cattle, dairy, pig and poultry units where livestock died due to inadequate feed, sanitation or veterinary care or where reproduction was unprofitably low due to poor animal husbandry and/or nutrition, irrigation pumps, milking machines, and agricultural machinery which were damaged by improper use and/or maintenance.

- (e) Purchase of inputs and sale of output. Small farmers frequently did not know where to purchase needed inputs at competitive prices, nor have they been able to transport and market their output. Competition from large, efficient commercial producers was intense in many areas in which PIDER financed enterprises must sell (particularly pig, poultry and dairy produce), operating margins were small, and PIDER enterprises were sometimes at a locational disadvantage. PIDER beneficiaries had difficulty producing a stable output and finding reliable purchasers. Inability to sell perishable products like fruits and vegetables for lack of market knowledge and reliable transports was also important. Examples: inability to purchase fertilizers or pesticides for fruit tree maintenance; inability to obtain poultry or pig feed at prices permitting profitable operation, inability to sell pigs and chickens.
- (f) Depreciation of investments. High depreciation leads to short investment life. Damage to and deterioration of project investments require early reinvestment on many projects, but such expense often exceeds the funds generated by the investment and may exceed beneficiaries' capacity to borrow. Examples: corrals and fences often deteriorate rapidly in the humid tropics, pastures degenerate to renewed shrub growth and machinery longevity is reduced by hard inoptimal use.
- (g) Gestation period. Gestation periods are long for some investments and beneficiaries were unable/unwilling to maintain the investment for the required period. Examples: beef cattle and fruit trees, both of which require continuous attention during 4-5 years without significant income production. Beneficiaries are required to work elsewhere to maintain families, often migrating seasonally when no work is available locally. Beneficiaries grow frustrated with cattle units, which are disbanded or only marginally maintained. Orchards are not weeded or watered, growth is stunted and trees die.
- (h) Social/organizational failures and conflicts. Preoccupation with achieving rapid production increases led PIDER and the implementing agencies to initiate construction of productive works in many communities where only partial support and understanding of the project had previously been obtained from the ejido. Beneficiaries in these cases often took a passive, skeptical view of investments, believing even after they were "given" the physical works that the project still belonged to the Government or the implementing agency, and that they were simply employees. Also, usually only a small

portion of the ejido members were involved as beneficiaries because the investment provided too little permanent employment and/or income to permit participation by all, or because some members did not wish to participate. Small groups were often the only viable organizational means to proceed, but occasionally led to monopolization of the benefits by a few (using collective resources) and/or serious internal conflicts.

62. The problems mentioned above were of serious proportion during PIDER I. These issues are widely recognized and discussed by PIDER and implementing agency staffs as well as within the Bank. But it has required substantial time for effective solutions to be found and implemented. Political pressures and bureaucratic interests in the entire PIDER framework favored construction of investments above concern with their operating efficiency. PIDER and the implementing agencies also had difficulty agreeing how a system should be established to monitor and care for "completed" works. The agencies assigned the role of technical assistance generally did not have funds for investment rehabilitation. Rehabilitation could be financed from credits, but these had to be solicited and approved. PIDER generally financed new undertakings rather than rehabilitate old projects. Coordinating committees, originally composed of PIDER, BANRURAL, and FIRA staff, and subsequently expanded to include staff of other operating agencies, were initiated in 1979 in two pilot regions to regularly review PIDER productive investments and, when not operating, identify and carry out the necessary remedial measures. These were successful, it appears, only in one region. An effort is being made under PIDER III to institutionalize this procedure nationwide.

63. Improvements also have been made in planning and implementing new productive investments. More attention is given to beneficiary priorities and to their organization and planning. Design and supervision of construction has been improved, agency coordination is better, projects requiring skilled management often include provision of several years' private technical assistance (through a credit subsidy). Producer associations have been formed to permit better commercialization and financial management in some regions, and projects requiring long gestation periods have been implemented with greater care. Nonetheless, the degree of improvement and the amount left to be done vary greatly by region and by type of project. Technologies still require improvement, greater control is needed over project design and implementation (political and other extraneous factors seem still damaging to project impact), technical assistance (save when specifically attached to a project) remains weak, and more attention is needed to resolve marketing problems.

D. Extension and Research

64. Agricultural extension was expected at appraisal to be a crucial element of the rural development effort and, also, to be one of its weakest components. The extension/research component was crucial in two aspects. First, PIDER expected to achieve substantial production increases in rainfed agriculture, particularly in traditional staples like corn and beans which were produced by nearly all farmers in the PIDER microregions. This effort was to be a principal means of creating widespread production benefits. Its

success depended, however, on the identification of improved technical packages for a wide variety of production systems and their subsequent transfer to farmers.

65. Second, PIDER expected to introduce a variety of new productive enterprises (small-scale irrigation, livestock units, fruit orchards) to small farmers having prior experience only with traditional agricultural practices and, in general, little education. The technologies to be introduced were both capital and management intensive and required much greater market involvement (the traditional crops had been produced largely without purchased inputs and were consumed principally at home, while the new enterprises required many purchased inputs, including services, and a major portion of output was to be sold). Because investments required group instead of individual action, beneficiaries had to accept and become adept at collective management. New knowledge and skills had to be quickly acquired for the operation of these enterprises, before it was decapitalized through production losses or deterioration of the physical infrastructure and/or animal stock. Without intensive ex-ante training of the beneficiaries and detailed supervision during the first several years of production, the productive enterprises were unlikely to achieve their goals.

66. The task assigned to the extension/research system was enormous. PIDER was initiating investments in many microregions in which there had been little prior extension/research activity. Extensionists with a wide variety of technical skills were needed. A major extension/research staff expansion was required. Few personnel were available. Staff had to be trained, organized, and given practical experience.

67. Because the extension/research system was known to be weak, efforts were made at appraisal to strengthen it. But these efforts were unrealistic. The appraisal report called for development of the research/extension system concurrently with the implementation of PIDER's productive investments. Such development could not take place sufficiently rapidly. Implementation substantially outran the capacity of the research/extension system to guide and service it, with damaging effect on project achievements.

68. Moreover, at negotiation no acceptable plan had been submitted by SAG for the provision of extension and applied research to the 30 PIDER I microregions. Submission of an acceptable plan was made a condition of loan effectiveness. SAG submitted a draft plan for comments in September 1975 and, based on this plan, effectiveness was approved. Bank staff indicated at that time that the SAG plan was still deficient in key respects, however. It was not much more than a statement of intentions (a concrete proposal was to be submitted in November 1975 and Government approval of this proposal was expected in January 1976), contained no implementation chronology, no indication of which specific actions would be taken, nor which agencies or sub-departments would be responsible.^{1/} Thus, the project was initiated without any substantive reason to expect that extension/research could play the important role assigned it.

^{1/} Internal Bank memorandum, September 25, 1975.

69. The extension system was seriously handicapped by the lack of technical packages with which to work, but was further constrained by a lack of both effective organization and of suitably prepared and motivated extension agents. Extensionists often had no clear responsibilities. Their work programs lacked specified projects and objectives, and their performance was not evaluated in terms of field results. Agents from different agencies and/or departments working in the same region often overlapped. Different extensionists visited the same PIDER projects (usually on an irregular and uncoordinated basis) and, after rather hasty observation of production problems, offered different and sometimes conflicting recommendations. Beneficiaries were confused and frustrated. Simple logistical, bureaucratic problems were also important; for lack of vehicles or funds for operating expenditures (gasoline, per diem), or because of routine paperwork, agents spent a dominant proportion of their time in the office. Agents were also poorly assigned, working on production problems outside their specialties or in ecological regions different from that for which they were trained and where their knowledge was much less applicable. And there was great staff turnover, either due to promotions and transfers within the system or to departures to the private sector.

70. Many extension agents were poorly qualified to work with small farmers either because of inappropriate training, lack of experience, lack of motivation, or cultural problems. Most extension agents were recent agricultural graduates having little practical experience. Their academic training focused on modern production practices utilized by commercial producers, and their recommendations were often inappropriate for small farmers working with different production techniques and within different financial and marketing constraints. Extensionists needed training in small farmer agricultural systems, so as to understand what the small farmer is doing and why, and in communications, so as to absorb as well as to convey information effectively. In addition, many extensionists, college educated in urban areas and accustomed to middle-class values, incomes and comforts, confronted a cultural gap which inhibited communication with the beneficiary.

71. Farmer preparation and training prior to receipt of a major investment was insufficiently emphasized. Training was particularly important whenever a valuable, easily damaged asset would be managed by small farmers having no prior experience (e.g., livestock or machinery). Apprenticeship on another operating enterprise would have been a useful complement to training courses (it is now being used in some areas).

72. Investments were planned and constructed first, and extension and marketing were usually arranged subsequently. This procedure should be changed. Extension agents who will be responsible for the outcome of the investments should be identified prior to the investment, involved with the community in the planning stage, and then responsible for technical assistance, including advising other agencies when their support is required. This also is now being done in some PIDER regions.

73. Although the extension/research system functioned poorly during PIDER I, there are a number of successful cases. What characteristics do these successful cases share? First, success has been greatest in those areas

in which small farmers have higher levels of education and some prior experience with the technology to be introduced. These producers demand more of extension agents and/or look for alternative solutions if effective assistance is not forthcoming. In a number of cases, for example, ejido groups have incorporated new members from outside if such members brought badly needed expertise, e.g., beef cattle, dairy, or irrigation management. Second, success has been greater where dedicated extension agents have worked closely with producers on a regular basis to solve clearly identified production problems. Examples may be found in nearly all of the regions where PIDER is working, and in nearly all of the production areas sponsored. On a significant proportion of livestock units developed in recent years (especially dairy cattle, pig, and poultry units), funds have been provided through FIRA and BANRURAL for employment of veterinarians on a regular and intensive basis during the initial years, usually with good results. Third, small farmers have obtained assistance from other sources, e.g., from contracted accountants and from input suppliers.

E. Participation

74. PIDER took the lead in promoting beneficiary participation in public investment programs in Mexico, and substantial evidence exists that effective participation, when it has occurred, contributed importantly to project success. Nonetheless, participation at both the planning and subsequent stages was more limited than projected at appraisal and, though increasing, remains limited still.

75. The problems encountered with participation were partially foreseen in the appraisal report. Most small communities (especially ejidos) in PIDER target areas had only a minimum of previous social organization. Official policy historically had discouraged organization and had limited the demands which ejidatarios could make on Government resources. Ejido land titles and certificates of membership had not been issued to even one-third of the "existing" ejidos (in 1972), resulting in serious conflicts over boundaries among ejidos, between ejidos and private owners, and among ejidatarios. Abuses of ejido legislation were pervasive and well known, but little or no corrective action had been taken by any public agency and ejidatarios, in general, had no effective legal recourse. The Secretariat for Agrarian Reform (SRA), officially in charge of organizations and tenure issues, was organizationally weak and its staff was limited in both numbers and in quality. SRA program actions were strongly influenced by political criteria. Under the Echeverria administration, actions had been taken in 1973-74 to strengthen SKA and to improve the land tenure situation by issuing titles and membership certificates. Substantial progress was made, although the overall situation of the ejidos remained extremely weak and continued to be plagued with tenure, membership, and social conflict.

76. At appraisal, SRA was given the primary role of farmer organization. Funds were provided through PIDER for increasing SRA's staff and, thereby, its activities, in PIDER I microregions. The approach to be followed was only partially specified, however. Moreover, PIDER soon found that even the spirit of its agreement with SRA was being violated, many of the SRA staff

assigned to PIDER I regions were being used in non-PIDER regions on other tasks. With Bank support, PIDER threatened to cut off its funds unless SRA staff were promptly and permanently reassigned as agreed. SRA reluctantly accepted. Shortly thereafter, however, political concern with rural land tenure conflicts and internal reorganization of SRA resulted in substantial SRA staff resignations and a significant weakening in its efficiency. To obtain even the minimal farmer organization required legally to constitute farmer groups as recipients of investment projects (and/or credit), PIDER since then has turned increasingly to other agencies (BANRURAL, SARH, etc.) and to its own staff. These efforts were limited by resources, but PIDER increasingly sought to involve beneficiaries in the rural development effort, to ensure that they were more fully informed of PIDER's purpose, of their rights and responsibilities in the PIDER program, and of the channels through which they could work to achieve more desired ends. PIDER's efforts were more intense and successful in some regions than in others.^{1/}

77. Participation was needed at every stage of the PIDER program. Community inhabitants have substantially more knowledge regarding available resources and talents than an external technician, who, however competent, cannot obtain this information with direct interaction with them. Communities have investment priorities which are often crucial in identifying works of economic value. Communities have preferences for organizational arrangements (including means of assigning employment and determining the mode of income sharing) which must be satisfied if a project is to be accepted, maintained, and operated efficiently and if social harmony is to be achieved. And communities constitute a potentially useful monitoring institution if properly informed of the project's aims, their rights, and the channels through which to seek redress if not satisfied.

78. Although participation was increasingly recognized as being essential for effective rural development, three problems confronted the growth of participation. First, efforts to organize farmers were often resisted politically at the national, state, and local levels and, when not resisted directly, are resisted indirectly by failure to assign resources to this goal. Second, participation, when encouraged, was a slow, staff intensive process, often inhibited by socio-economic problems internal to the ejido, i.e., leaders who did not wish to lose their traditional dominance to more democratic decision making, family and personal conflicts, etc. Some PIDER staff made great effort to achieve participation, but achieving effective participation required substantial time. This indicates that rural development programs ought to be designed realistically, i.e., properly sequenced, to reflect the level and capacity of beneficiary participation and to reinforce it. Third, although there was a high correlation between the degree of participation and PIDER investment success (with causation running in both directions), overreliance could not be placed on participation as a panacea

1/ Three highly useful studies of beneficiary participation in PIDER are: Michael M. Cernea, op. cit., and "Popular Participation in Investment Programming in PIDER - Mexico," Agriculture and Rural Development Department, The World Bank, Working Paper (Draft), June 1982, and Richard Lacroix and Debora Caro, World Bank Rural Department Projects in Latin America, Annex 4 - The PIDER Program in Mexico: A Case Study, 1983.

for project ills. Most beneficiaries had been accustomed to very humble posture regarding government officials and other persons with higher education and/or social status. Beneficiaries were rarely qualified to offer sophisticated technical opinions. They were often uncertain whether their judgements (from common sense) were valid. They were unaccustomed to require compliance from government agencies, particularly if resistance was encountered from the agency.

F. Credit

79. The Bank considered it essential that credit planning be included in the investment planning stage to ensure that working and development credits would accompany the infrastructure provided by public grant. The credit component was to be administered by FIRA under the same institutional arrangements as had been applied for lending to low-income producers in the Fourth Agricultural and Livestock Credit Loan (Loan 910-ME).^{1/} Both private and public commercial banks were expected to make loans (following established criteria) and to discount these with FIRA. The Bank also believed that the technical and financial skills of FIRA's staff could improve productive investments planning and hoped that credit use itself would permit greater cost recovery (as not all the investment would be provided by public grant) while simultaneously promoting greater beneficiary participation.

80. The credit component did not function as planned until the project had nearly closed. First, unlike the procedures followed in PIDER's other components, PIDER's coordinating mechanism for allocating and supervising credit did not include the principal credit agencies (FIRA and the public banks) with which it was expected to work. Not until late 1976 did FIRA and PIDER sign a formal agreement to establish the needed coordination. Second, the three public banks operating in the agricultural sector (BANAGRO, Banco Agricola, and Banco Ejidal) were merged into BANRURAL in 1976 and several years passed before the new institution became fully effective. This ineffectiveness was crucial to early credit performance because private banks were reluctant to loan to ejidatarios, whose land cannot be mortgaged. The official banks accounted for 83% of total PIDER lending during the project. Third, FIRA had few offices and little staff within the microregions in which PIDER was operating, its staff was accustomed to work primarily with larger commercial farmers, and its management was not eager to extend business to smallholders. Fourth, PIDER's and FIRA's institutional approaches toward rural development were quite different, the first oriented toward the use of public grants for infrastructure and the latter toward credit for economic enterprises, and each hesitant to embrace the approach of the other.

81. As a result of the problems cited, credit often did not accompany PIDER's productive works and, when it did, it was often delayed substantially. By mid-1978, the allocation of development credit was still only 33% of the

^{1/} Project Performance Audit Report, Mexico - Fourth Livestock and Agricultural Development Project (Loan 910-ME), OED Report No. 2577, dated June 29, 1979.

appraisal estimate. FIRA and PIDER established a standing committee in late 1978 which, in coordination with private and official banks, worked increasingly well to coordinate investment and credit planning.

82. Credit planning was less successful than hoped for in an important qualitative sense as well. The cost of productive investments was to be covered by funds from three sources: public grant, credit, and beneficiary direct contributions. No clear criteria were established at appraisal for the proportion which was to be borne by the grant element (which was justified mainly on distributional grounds), but the Bank assumed that the entire investment package (including that part financed by grant) would be economic. In practice, the proportion financed by grant has varied substantially across region, investment type, and time. The grant element has frequently been used to make investments financially feasible (for the beneficiary) which otherwise are economically unjustified.

83. The Bank was aware at appraisal that provision of investments through public grant was conducive to inefficiency and hoped that this tendency would be moderated by including the credit agencies, which were expected to be more concerned with economic criteria, in the planning stage. This effort initially failed when there was no coordination between PIDER and the credit agencies. The credit agencies' growing involvement has since improved the situation. However, both FIRA and BANRURAL were also under political pressure to increase lending to low income farmers and were reluctant to intervene too harshly on the side of economic criteria. PIDER projects made it easier for them to lend to low income farmers by assisting with and/or financing farmer organization and by providing, through infrastructure, a resource base needed to make subsequent lending of lower risk. Competition between the two credit agencies was intense in some regions, and each agency expressed concern that projects rejected by one agency on economic criteria might be accepted by the other. Both institutions also came under direct pressure from State officials eager that specific investments be made for political reasons.

84. Credit use in the 30 different microregions is highly varied, as shown in Table 2. About one third of the microregions showed no significant use of PIDER credit and half the regions showed no growth in the amount of PIDER credit used over the project's implementation. These data suggest that the credit program had substantially more success in some regions than in others, either because PIDER-FIRA-BANRURAL coordination was better or because the region's productive potential was greater. It is evident that a number of the microregions (or parts of microregions) in which PIDER was working have development potential well below that assumed at appraisal. For example, FIRA's total discounting (to all beneficiaries, from all lending sources) for development credit in the microregions show that seven PIDER I microregions had no significant credit use in 1979. Total discounting in the other microregions grew at nearly twice the rate as PIDER credit use, suggesting that in these regions opportunities for credit use outside the areas where PIDER investments were made were greater than inside, despite the impact of PIDER investments.

Table 2

FIRA Development Credit Disbursements, PIDER Loan
30 Microregions, 1975-1979

<u>Total Operations</u>	
1.	<u>Millions of pesos disbursed.</u> <u>Number of Microregions in category.</u>
<10	10
10-75	16
>75	4
2.	<u>Number of credits disbursed.</u>
1-7	4
8-14	7
15-50	13
50-100	3
>100	3
3.	<u>Growth of credit disbursements.</u>
High growth	9
Unstable movement	15
No growth	6

Source: FIKA, elaboration by audit mission.

G. Monitoring and Evaluation

85. An effective monitoring and evaluation (M&E) component was considered essential to successful implementation of the PIDER project. PIDER's task was large, complex, new and uncertain. Feedback on project impact was needed to identify strengths and weaknesses and permit systematic improvements in project actions. Problems had to be caught and corrected quickly if project investments, which were proceeding rapidly, were to have the desired effect. Crucial issues requiring review included the appropriateness of the technical packages proposed for on-farm application, farmer response to and participation in the PIDER effort, and the ability of participating agencies to carry out and coordinate their assigned tasks.

86. As with other facets of PIDER, the development and functioning of the M&E component offers aspects to criticize and applaud. It took a useful first step, setting an important precedent and providing experience, and it identified important project shortcomings. But it failed to achieve the (unrealistic) task which it was assigned. Discussion of this failure demonstrates some of the important obstacles faced. It also suggests lessons for future M&E efforts.

87. The Government preferred that the M&E component be divided into two parts, handled by two different institutions. Separation was considered important to evaluation objectivity. Monitoring, defined to involve the collection of information on the physical progress of construction and on the disbursement of appropriated funds, was to be handled by Presidencia (PIDER) which was already engaged in this function as one of its principal tasks. Evaluation, to involve analysis of the effectiveness of project actions, was to be carried out by a new Research Center for Rural Development (CIDER).^{1/} CIDER was expected to act in close cooperation with PIDER, even utilizing PIDER staff on some of its evaluations, but was to be budgetarily separate, financed directly by funds from the Secretariat of the Treasury (no external assistance), and governed by a Board of Directors composed of representatives from the principal implementing agencies involved, PIDER itself, and the Treasury.

88. The monitoring and evaluation components did not develop in the way expected, nor have they had the desired impact on PIDER operations because: (i) PIDER management focused on disbursements and physical implementation to the exclusion of subproject on-farm operating impact; (ii) PIDER/CIDER separation inhibited the flow of information between them, and (iii) institutional tensions between PIDER, CIDER, and the implementing agencies constrained both the evaluation process and use of the results obtained.

89. Presidencia (and later SPP) collected information on the physical completion of PIDER works needed to permit disbursement to implementing agencies and to maintain a record of institutional achievements. It collected no information until 1978, however, on the state of the works after disbursements ceased, i.e., whether they were functioning and/or having the expected impact. The lack of information on project operation reflected a traditional bias of federal agencies toward investment as opposed to operation. External pressure on PIDER to implement more rapidly reinforced this bias. Although PIDER made a much greater effort than was common in Mexico to ensure the compliance of implementing agencies with contract specifications (to such an extent that implementing agencies in some areas avoided PIDER work), and sought to coordinate the actions of different agencies, until 1978 there was no complete assessment of the operating condition of PIDER investments, let alone a widespread effort to achieve solutions when problems appeared.

90. Separation of the monitoring and evaluation components between Presidencia and CIDER reduced the flow of information between them for simple logistic reasons. Similar problems affected PIDER and the implementing agencies which were farther removed bureaucratically. Institutional tensions exacerbated the situation. Many of these tensions remain.

1/ CIDER was expected to focus on issues like: causes for discrepancies between planned and actually implemented activities, interagency co-ordination and interagency efficiency, field level project impact, effectiveness of campesino organization, and importance of community responsiveness. CIDER was also expected to provide training courses in rural development techniques for PIDER and other agencies' staffs.

91. The PIDER-CIDER relationship was immediately conflictive. First, substantial disagreement emerged regarding the purpose of PIDER, and also the purpose of CIDER, i.e., about the goals to be evaluated and about whether the foremost purpose of evaluation was to chronicle PIDER's accomplishments or to identify its shortcomings. Second, CIDER's semi-autonomous status permitted it a more free voice (as intended), but thereby made its critical analyses more public and more institutionally threatening. This gradually resulted in a reduced CIDER role (with PIDER developing more in-house evaluation capacity). Third, many of the operational problems identified by CIDER were the result of implementing agency inefficiency, yet PIDER's power to affect these agencies was limited. CIDER criticism appeared (externally) aimed at the PIDER program, hurting PIDER, while the implementing agencies (threatened nonetheless) resisted the criticism. Identification of problems was therefore transformed into program improvements only very slowly.

92. PIDER and CIDER staffs had different conceptions regarding what was rural development and what should or could be done to achieve it. These differences were accentuated by institutional interests. PIDER staff were hired to implement a major new project. They were given large resources and a mandate to make rapidly a significant and politically evident impact on the rural sector. Their principal action was to coordinate and extend the investments made by the federal agencies already operating in this area. Not surprisingly, PIDER staff was intent on achieving a large aggregative impact and had a public works bias. In contrast, CIDER staff evaluated this effort from an independent, almost academic viewpoint. Most of its members were sociologists and anthropologists. They were interested in writing for a wide audience, and to influence public debate on rural development issues. Their focus was on the rural community, on "grassroots" developments (farmer organization and beneficiary participation), and on distributional as opposed to aggregative impact. Much of their criticism was aimed directly at the public works bias.

93. The two perspectives described were potentially complementary through interaction, but were highly conflictive in practice. For example, CIDER's initial studies suggested that PIDER's field activities were much less effective than had been hoped. In several instances it became apparent that the impact of microregion programs that had appeared strong prior to CIDER's evaluation was in fact very weak. Management was often identified, at least indirectly, as a principal causal factor and several major changes in PIDER's State management staff resulted. These changes were positive insofar as management competence and motivation often has been identified as an important factor in determining the quality of PIDER's programs. However, many problems identified in the CIDER studies were not resolvable by PIDER staff changes. They required major changes in PIDER's overall approach, including a shift in emphasis from physical investments to farmer organization and training, and were dependent on improved implementation (under whatever strategy) by some of the weaker federal agencies involved.

94. PIDER did not disagree with many of CIDER's assessments.^{1/} PIDER tried repeatedly to obtain solutions for some of the institutional problems which CIDER identified, e.g., improved investment design, beneficiary organization, agricultural extension, and credit provision. It had some success, but usually encountered resistance from the implementing agencies. Feeling their expertise and institutional territory threatened, the implementing agencies fought back, delaying PIDER work and lobbying against its program at higher levels.^{2/} PIDER had some leverage in the funds which it controlled, but could use this leverage only at the expense of its own program investment goals. The agencies' ability to resist PIDER's funding leverage also grew with the emergence of other public investment programs such as CVC and COPLAMAR, which "competed" for agency implementation capacity. Further, PIDER was not certain that a political mandate existed for the change which CIDER most encouraged, i.e., an increased effort to achieve farmer organization and beneficiary participation. PIDER needed farmer organization to obtain beneficiary acceptance, as opposed to rejection, of its proposed investments. PIDER was initially less concerned to ensure that farmers were organized to manage investments effectively. This effort was much more time consuming. Moreover, opposition was often strong at the state and local levels where farmer organization threatened vested interests. There was hesitancy to initiate changes whose longer-term effects were not clear and, possibly, not controllable, particularly after land tenure disturbances in late 1976 caused some political reaction. Thus, PIDER felt the alternatives suggested by CIDER were difficult, given its own mandate.

95. PIDER also felt that CIDER's criticisms, which became semi-public because of CIDER's semi-autonomous status,^{3/} took the gleam off PIDER's achievements and weakened rather than strengthened it bureaucratically, placing it at risk within a fierce budgetary struggle for resources.

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- 1/ Central PIDER staff, as part of the mid-term evaluation, carried out a complete inventory of PIDER works in 1978 and found that many works which had been declared operational by state and local staff were, in fact, not operating. Following the 1978 review, pilot PIDER-FIRA committees were established in several regions to review problem projects and seek improvements. These committees were then extended in some areas to include other implementing agencies; the extended committees have been quite useful where they have gotten off the ground.
 - 2/ PIDER also did not have a sufficiently large or technically well qualified staff to intervene adequately in all the complex actions taken by implementing agencies. Thus, PIDER's efforts to intervene were sometimes technically inappropriate.
 - 3/ As CIDER's board was composed of representatives from other federal agencies, it was easy for institutional enemies of PIDER to obtain information to be used against it.

96. The appraisal report (Annex 7, page 2) recognized that if CIDER was perceived as being threatening to agencies in the field, its evaluative work could not be carried out successfully. In this case, CIDER came into conflict with the institution which it threatened most, PIDER. As this conflict could not be kept in-house, the PIDER-CIDER relationship gradually changed.

97. PIDER first requested CIDER to be more supportive in its evaluations, to report on its accomplishments, and to be practical in its recommendations, recognizing the problems which it (PIDER) had with the implementing agencies. PIDER also began to move away from CIDER, providing less cooperation. CIDER made some effort to comply, placing more attention on development of new institutional procedures and staff manuals, all designed to improve PIDER microregion annual and intermediate planning procedures. CIDER also moved to increase its institutional distance by diversifying its activities to focus on more general rural development issues not specifically related to PIDER. This focus became more logical with the emergence of other rural development programs during the Lopez Portillo administration. The conflictiveness of CIDER's studies was thereby reduced.

98. CIDER now deals with specific PIDER problems only occasionally. Professional discourse between PIDER and CIDER, while cordial, appears infrequent. There is no effort to establish an agenda of problems for analysis, nor to seek specific management recommendations. In turn, a reorganization after 1978 has gradually provided PIDER with greater in-house evaluative capacity, which is being strengthened under PIDER III. The thrust of this effort is to maintain an inventory of the operational status of each PIDER created enterprise through special teams in each State, and to see that this information is in the hands of PIDER management. The effort will have the desired effect, however, only to the extent PIDER feels that its institutional well-being is directly linked with the operational success of these enterprises so that its efforts are directed primarily at this goal. This linkage also can only be achieved if PIDER itself is able to convince higher Government officials (who ultimately set PIDER policy), and also its counterparts in the implementing agencies (who are the direct actors), that achieving sub-project economic success should be the principal goal of their joint efforts.

99. Conflicts between PIDER and implementing agencies whose actions it was to coordinate and supervise have been similar to PIDER-CIDER conflicts, but with somewhat different outcome. Federal agencies traditionally were highly independent, often acting in isolation; decision making was centralized, so that agency procedures and program actions took inadequate account of the wide variation in rural environments; and agency goals were often established and pursued with insufficient concern for whether the resulting achievements were of use to those who received them. PIDER's purpose was to ensure that agency goals and actions were adjusted better to beneficiary needs, and better coordinated. However, because resistance to intervention in specific agency procedures and actions was great, and PIDER power limited, PIDER decided after initial conflict to limit its actions to coordination, auditing and monitoring. It is encouraging that experience and contact between PIDER and agency staffs nonetheless led to improved working relationships and wider recognition of implementation problems (which were once hotly

denied and debated). Efforts are growing (particularly at the technical level) to alleviate these problems. But PIDER (as opposed to CIDER) carried out little or no formal evaluation of agency actions and had too little analytical discussion with agency managements regarding needed program actions. Evaluation was perceived as conflictive (direct interference). As a result, slow progress was made toward resolution of the implementation problems faced. PIDER's efforts to improve implementation are likely to be successful only if a less conflictive means can be devised by which PIDER can participate with the agencies in a mutually accepted learning process.

100. It might be helpful to encourage the institutionalization of monitoring and evaluation procedures within the implementing agencies (some of which now have no systematic concern for evaluation). Establishment of an agency network through which implementation problems are systematically identified and analyzed would create added knowledge and an internal voice within each agency, would increase discussion of and, hopefully, agreement on project goals among PIDER and the agencies, and a more participative approach might make evaluation appear less conflictive while still allowing PIDER's central staff to maintain an overall evaluative perspective. Realistic expectations regarding performance of an evaluation system should be maintained, however, given the newness of formal evaluation procedures in Mexico, the complexity of PIDER institutional relations, and the political and bureaucratic obstacles thereby created. Evaluation cannot be effective unless given adequate guidance and support from the political authorities themselves.

101. Since 1980, institutional evolution has introduced a further complication. Planning and implementation authority has passed to the State Governors. Under the monitoring and evaluation system currently being adopted, monitoring is to be undertaken by SPP personnel at the microregion level and the results passed forward to central PIDER (SPP) staff for evaluation purposes. However, it is likely that (critical) evaluations of program actions in specific states will be resisted by State Governments or, alternatively, that pressures will develop for central PIDER evaluations to be muted, and thereby less effective.

H. Rate of Return and Other Project Criteria

102. The calculation of a single average rate as an indicator of project success should be handled with caution, because (i) specific economic information regarding project impact is badly lacking, (ii) sub-project design and impact (to the extent known) have been highly diverse in different circumstances, and (iii) the project is associated with substantial intangible costs and benefits not included in the conventional economic calculation. On balance, however, the project suffered implementation and subsequent operating problems which have significantly reduced the impact expected from productive (on-farm) investments. It is conjecture whether the intangible benefits associated with the project have compensated for this shortfall.

103. The project financed several thousand small projects, both on-farm and public infrastructure, in about 1,500 target communities. Data regarding output, input use and costs, and sales, have been collected and analyzed for only a few PIDER-financed enterprises. The mix, scale and phasing of investments has varied substantially among communities and microregions, making it

difficult to extrapolate results from a few, small-sample studies. Where known, similar investment types have shown significant variation in their economic evolution through time. The outcome of many investments is still indeterminate and will depend on future actions by government agencies and beneficiaries, as well as the general economic environment. The existence of other public investment programs in project areas makes it more difficult to isolate PIDER I costs and benefits. And there is a complex array of price distortions in the Mexican economy, for which adjustment theoretically should be made. These factors make calculation of the ERR necessarily approximate. Better information on this large project is badly needed.

104. The PCR (paras. 4.19-4.21) reestimates the ERR at 6%, recognizing that delayed start-up and slower growth in output during the initial years of many subprojects will reduce the ERR from appraisal expectations. The audit believes the PCR estimate is still optimistic. The divergence between expected and actual operating results for the productive investments, which directly and indirectly account for over 70% of project costs, appears even larger than assumed in the PCR. Numerous investments, given their type (e.g., soil and water conservation and cattle units) would not have been expected to yield high returns had they been optimally implemented. And there is little evidence to support the PCR assumption that project activities have caused generalized increases in rainfed crop yields in project microregions.

105. The impact of most PIDER I on-farm investments is well below that expected. Conversations with Government and Bank staff, review of CIDER evaluations and Bank supervision reports, and direct field observations suggest that only about 20% of the productive investments might earn returns equal to appraisal expectations, while 80% will probably earn returns significantly below this level (it appears that a significant fraction are likely to have little output). While perhaps one in five projects is working well, providing evidence that opportunities exist for profitable productive investments when these are correctly designed and implemented, higher than expected investment costs, operating costs, and depreciation, production delays and lower operating output affected most of the projects. The cumulative effect of these factors is large. There are a significant number of outright failures. The audit concludes, therefore, that the ERR of the productive investment component probably will only be marginal.

106. The PCR assumes that subproject performance, although delayed, will ultimately reach expected levels. However, efforts to improve the operating performance of PIDER I productive investments since the 1978 mid-term review seem to have had limited impact to date. Under PIDER III, increased emphasis is to be placed on subproject rehabilitation and improved technical assistance. This effort could improve the rate of return, its failure could imply further deterioration of performance.

107. The PCR also assumes substantial increases in rainfed crop yields. The PCR assumes (Table 4.5a) that the pre-PIDER yields were approximately 50% of those assumed by the appraisal, and that yields now will increase by 1990 to 3.33 times the before development level for rainfed corn and beans and for irrigated corn, and to 5.25 times for rainfed beans. These assumptions

appear substantially exaggerated, actual yield increases have been small to date and, where occurring, seem little related to PIDER investments and extension efforts. A major failing of the project, relative to appraisal expectations, was the inability to develop an effective system for the design and delivery of new rainfed crop techniques for poor farmers in marginal areas, but it was probably unrealistic to expect that this would be easily forthcoming.

108. The appraisal report assumed that the rate of return on the productive investments would carry the costs of the productive support investments and still provide an overall EER of 16%. If the return on the productive investments is instead minimal, it is unable to carry the costs of the productive support investments. The productive support and the social investments have additional justification, certainly their benefits will exceed those directly reflected in the outputs of productive investments. But even with adjustments the project EER, as conventionally calculated, is probably disappointingly low.

109. The substantial intangible benefits associated with PIDER I must also be considered, most importantly, distributional, learning, attitudinal, institutional and political effects. Some overlap occurs among these effects, but distinction among them is useful.

- (a) Distributional. PIDER's target beneficiaries were unusually poor by Mexican standards. Despite relatively poor investment performance, a high government subsidy permitted net gains to most beneficiaries. Improvements in income distribution may make it appropriate to weigh more heavily benefits achieved by PIDER beneficiaries. However, CIDER evaluations were concerned that PIDER productive investments frequently exacerbated rather than reduced income and social differentiation within communities.
- (b) Learning. Mexico had little prior experience with broad-scale rural development carried out mainly in rainfed areas with small farmers. PIDER provided a gigantic, varied (and costly) working experiment. Much has been learned, both about what to do and not to do. PIDER resulted in substantial staff training (Bank staff also learned much about rural development), in major improvements in planning, budgeting, and evaluation mechanisms within Mexican public administration; in the identification of many technical problems (rainfed agricultural technology, delivery of technical assistance, ejidatario organization). An increased appreciation of the importance of the human element emerged (project manager, ejidatario, agricultural professional, etc.), as opposed to physical investment. The weaknesses of many federal agency procedures and practices also became more clear.
- (c) Attitudinal. PIDER activities induced substantial attitudinal change, separate from specific learning. The project encouraged positive attitudes among government officials and staff (both federal and state) regarding the goal of rural development. In a

few important cases, a developmental mystique has been developed, resulting in especially high motivation (there are also cases in which cynicism has resulted from poor performance, but these seem less prominent). Ejidatarios have been encouraged to assume positive expectations regarding government activities which can affect them, regarding their own productive potential, and regarding their capacity to affect ejido organization and leadership.

- (d) Institutional. PIDER initiated coordination and cooperation among federal agencies in achieving a common cause. Although initially there was substantial bureaucratic resistance, cooperation is now improved. The decentralization of decision making to the state and local level, including a strengthening of state and local government administrative capacity, was considerably advanced. Ejido organization has been gradually and hesitantly encouraged. Other rural public investment programs and institutions have emerged, both complementing and competing with PIDER efforts (CVC, COPLAMAR, Distritos de Temporal, FOIR).^{1/} These projects, which may owe some birthright to PIDER, have had positive and negative effects.
- (e) Political. PIDER was initiated largely as a political program and continues to be influenced strongly by political considerations. PIDER investments are considered important in the Government's continuing efforts to resolve social conflict and maintain social harmony in a society which shows substantial distributional differences. These effects are difficult to measure and to value, but they are important.

I. Bank Performance

110. Bank performance should be considered mixed mainly because of project results. A large and complex project was appraised rapidly, permitting a project with considerable priority to proceed quickly. The appraisal report was optimistic regarding the productive potential of some microregions, the availability of suitable agricultural technologies, and the ability and desire of large federal agencies (constrained politically and bureaucratically) to make rapidly fundamental changes in their operating practices. The report documented many potential project weaknesses, but gave little analysis to the problems which would result if specific institutions failed to fulfill their assigned role. Supervision reports were detailed, analytical and insightful, continuously seeking improvements in PIDER operations. Institutional processes were emphasized, but attention to field-level impact was substantial given the resources available. Bank staff encouraged and then

^{1/} COPLAMAR, working through agreements with implementing agencies, finances primarily social and productive support investments in marginal rural areas, some of which are also PIDER microregions. Its annual budget exceeded PIDER's by about four times in 1982. FOIR (Fund for Rural Public Investment) provided funds for rural productive investments; its work was suspended in 1981 after large corruption was discovered.

participated with PIDER-CIDER in an excellent (qualitative) mid-term evaluation. Bank project staff maintained a good working dialogue with SPP (PIDER), but had less contact with the implementing agencies. A tendency developed (perhaps naturally) for Bank staff to see PIDEK through PIDER staff eyes; as PIDER was institutionally and bureaucratically isolated from the agencies it was to coordinate and supervise, Bank project staff also remained somewhat isolated from them, making solution of project problems more difficult (PCR, Chapter VII).

III. CONCLUDING REMARKS

111. In reflecting on the PIDER experience, it is evident that this integrated rural development project was one of the more complex and difficult undertakings of the Bank. Thousands of small sub-projects, of many different types, had to be elaborated to fit diverse local environments. Few technologies had been proven. The available resource base was weak. Beneficiaries and government agencies had little history of interaction. A great deal of social and institutional, as well as physical engineering was required. There was little prior experience on which to draw. Much had to be worked out as the project proceeded, and many errors had to be expected as a natural process of learning. Nonetheless, the large size of the project, and the emphasis on rapid implementation which surrounded it, magnified the errors which resulted and probably reduced rather than increased the rate of effective learning from the process.

112. Recent research hypothesizes that rural development programs can best be implemented through a series of project stages, each of which emphasizes a different task.¹⁷ The structured approach emphasizes the innovative nature of the task and the need for continued evaluation of results achieved. Because rural development programs require substantial social intervention, which is likely to cause a varied and constantly changing project environment, project interventions are likely to require frequent adjustment. Efforts must therefore be made to develop organizations which will look on error (project shortcomings) as a basic data source for making project adjustments.

113. In stage one, a package of program actions is developed in a number of case efforts to achieve the desired goals at the community level. Substantial experimentation and evaluation, intensive in both financial and intellectual inputs, are required. Error rates are expected to be high, but declining. Much work in community dynamics is undertaken. After some success has been achieved, stage two is initiated. The emphasis is now on increasing the efficiency of project actions. Extraneous activities are gradually eliminated and important activities routinized. Efforts are made to achieve a fit between program requirements and realistic organizational capabilities. Staff

1/ Korten, David C., "Community Organization and Rural Development, A Learning Process Approach," The Public Administration Review, 1981.

development is expanded. After an institutional mechanism has been developed, stage three can begin in which the emphasis is on project expansion. The rate of expansion is governed by the rate at which the necessary organizational capabilities can be developed to support it.

114. The structured approach outlined is similar to the process detailed in many Bank projects in which a pilot effort is attempted as a precursor to major project expansion. This approach was not used in the PIDER project. In PIDER I, all three development stages were condensed into one; large-scale diffusion was initiated before either the technological packages or the institutional mechanism to implement them were perfected. It was assumed that both the packages and the institutional system would evolve rapidly to acceptable standards. The institutional system evolved rapidly, although systematic misfunctions reduced efficiency. The packages utilized were, in many cases, not effective. Further, because implementation was not undertaken in a truly "experimental" manner, the audit fears that investment impact was evaluated insufficiently to learn effectively.

115. The Bank considered a slower, more structured approach, but ultimately decided for larger, immediate involvement in hopes of improving PIDER's design through time.

116. The project must be evaluated from two perspectives. On the one hand, the project attempted too much, resulting in higher costs and lower achievements. The results suggest the validity of starting small and experimentally, and sequencing project actions carefully. On the other hand, political pressures for rapid action made such an approach difficult, and the Bank did achieve a useful dialogue with Government which contributed to improved PIDER performance over time.



GOVERNMENT COMMENTS

SECRETARIA DE PROGRAMACION
Y PRESUPUESTO

México D.F., april 16th, 1983

DR. MERVIN WEINER
Director General OED
The World Bank

Dear Mr. Weiner:

Attached to this letter I am sending the comments by page and paragraph to the P.P.A.R. Mexico-Integrated Rural Development Project (PIDER I). An official letter from Mr. Donaldo Colosio, Director General of Regional Programming and Budgeting will follow.

In general, the points of view expressed in the audit are highly subjective based on personal appreciations. The paper sounds too politically oriented, treating improperly several issues. The report is out of balance, for instance, the section on monitoring and evaluation takes 20% (9 pages) of the total number of pages whereas the impact is presented in only 3 pages.

The audit overcriticizes the failures of the productive investments stating that 25% of this investments are not working (equivalent to just 12% of the whole PIDER program), but never mentions the successes.

Throughout the paper, the time dimension is heterogeneous, some times is today's PIDER, in other instances is 1981 or 1976. The audit is for PIDER I.

It should be convenient to include some recommendations and alternative solutions to the problems.

Sincerely Yours,

A handwritten signature in black ink, appearing to read "José Luis Genel".

Lic. José Luis Genel
Director of the Rural Integrated
Development Program.

COMMENTS BY PAGE AND PARAGRAPH

Page - iii Basic data sheet, Item: Economic Rate of Return. In the Actual or Estimated Actual, a negative rate is stated. In the PPAM, paras. 53-58 it is expressed that the rate is marginal, but not negative.

Pages-8-to- Impact. The whole section should be rewritten. It 11- gives a wrong impression of the PIDER program over-emphasizing on the failures.

Para 17. It is mentioned that "is impossible to accurately asses project successes and failures, and their causes", nevertheless, "The audit believes that the ERR, is probably marginal. It is a difficult judgement whether the intangible benefits achieved (political , institutional, distributional, and learning) are sufficient to raise the project's summary ranking to an acceptable level".

So, is impossible to asses but with a simple subjective judgement, based an personal appreciation, the audit believes in marginal results. As there in no method to measures the intangible benefits we may belive from the PIDER view point, on subjective grounds that the weight attached to this type of benefits can be large enough to offset any costs and turn the project highly feasible.

Para.18. Just little attention is paid to the impact of the social and productive investment. In contrast, it is stated that " 25% of the productive investments are not operating ".

It is convenient to express that productive investments take 50% of PIDER resources, in other words, 12% of the whole program is not operating. In addition, this statement is contradictory with Para.25. (b) " In 1981 of 2,452 productive investments,...,222 (9%)^{1/} were completed and not operating ". So the impact section gives a misleading picture of PIDER.

Para.19. On the productive investments, it is commented that " Many successful projects have dramatically increased beneficiary incomes," but no one is mentioned, on the contrary, the whole paragraph only describes failure after failure giving a negative concept of the PIDER Program. It would be appropriate to include which projects were successful (information was given to the World Bank for the preparation of the PCR) and avoid such an array of improper words to describe the problems faced by the Program.

Para.20: It is written that " many of the problems identified in PIDER I are being alleviated under PIDER II" but the final sentence states that " weaknesses similar

^{1/} Equivalent to 4.5% of the total investments.

to those encountered in PIDER I remain in PIDER II ", this is contradictory and needs further clarification.

II MAIN ISSUES.

Page -12- Para.22. This paragraph is not clear and just shows a global appreciation of the change towards productive investments.

Page -15- Para.25. (b) As mentioned above the PIDER productive investments not operating is 9%, seems inconsistent with the " about 25% of the productive investments carried out are still not producing anything ", is worth to ask:as of when ?

Page -17- Para.26. At the begining it is said " PIDER was not very efficient a the field level, " afterwards almost the complete paragraph praises the achievements of the Program (we go along the same lines), nevertheless the last two sentences ", the number of investments which have been an economic success is relativy low. The cost of achievements obtained is high. This is PIDER's principal failing", once again the pleasant reading is disturbed by the dramatic ending. This is a highly subjective opinion. Where are the socio-political benefits ?

Page -17- Para.27. It would be proper to include that PIDER is putting its best efforts to solve the problems mentioned along the paragraph.

Page -18- Para.28. We do not consider that PIDER response to the solution of problems is "slow", and we completely disagree with " Political pressures and bureaucratic interest in the entire PIDER framework are in favor of implementing physical work as rapidly as possible ". It would be necessary to check the World Bank supervision missions files and to learn the PIDER's programming-budgeting process before writing this sort of statements.

page -22- Para.29. Once again, a good opening but in the mid paragraph the always personal, subjective and superfluous opinion " Nonetheless, the degree of improvement and the amount left to be done are highly variable and the audit seriously doubts if the PIDER package being implemented today is yet economic in the conventional sense ". What an unfair judgement. How the audit is measuring the TODAYS feasibility of the PIDER program, where is the empirical evidence, are the results of the PIDER II and III PCR's reports being discovered in advance ? We seriously invite the World Bank to study in depth the present results through a mid-term evaluation.

B. Monitoring and Evaluation

Compared to the rest of the paper this section takes 9 pages, equivalent to almost 20% of the whole report, seems out of balance and really do not contribute to an objective learning of the PIDER. The subject is already treated extensively in an extraordinary document:

" Measuring Project Impact: Monitoring and evaluation in the PIDER Rural Development Project-Mexico " (World Bank staff working paper 332, prepared by Michael Cernea).

Page -27- Para.37. The end of this paragraph is politically biased " PIDER wanted farmer organization..., but oppositions..., particulary after severe land tenure disturbances occured in late 1976 ". First of all, one thing do not has anything to do with the other, second, Mexico did not have at all severe land tenuere disturbances in 1976, there were only few problems in a couple of northern states.

Page -27- Para.38. All of it is completely irrelevant, we suggest to exclude it from the report.

D. Rate of Return and other Project Criteria

Page -38- Para.57. In paras. 53., 54., and 55. is advised that a single rate has to be handled with caution, difficult to extrapolate from few small sample studies, and impossible to asses the validity of the assumptions or accurately determine the impact of project shortfalls, nonetheless " the audit concludes that the ERR of productive investment component will only be marginal ". Including the productive support and social investments " the project ERR is likely to be minimal ", therefore the substantial intangible benefits (para.58.) are not being considered.

Page -38- Para.58. The intangibles associated with PIDER:(a) Distributional; (b) Learning, (c) Attitudinal; (d) Institutional; and (e) Political,are always described with a negative qualifying eg: (a) Distributional " Despite relatively poor investment performance,high government subsidy permitted net gain to most beneficiaries" . (b) Learning " PIDER provided a gigantic, varied (and costly) working experiment ".

E. Participation

Page -41- Para.60.Regarding participation, the whole paragraph is politically oriented and should be rephrased.For instance, " Official policy historically had discouraged organization and had limited the demands which ejidatarios could make on Government resources " is a very strong statement on official policy and we consider it incorrect. In addition, ejido land title had been issued to more than 50% of the " existing " ejidos and not to a third as is mentioned in this para.

Page -42- Para.61. Once again,inconvenient political issues are being expressed in this para. " With Bank support,PIDER threatened to cut off its funds unless SRA staff were comtly and permanently reassigned as agreed, SRA reluctantly accepted ". PIDER do not need the Bank support to cut or increase funds to any federal agency that works within the program.

Page -43- Para.63. The whole paragraph is irrelevant, given a wrong image of the organization system, is politically biased and improperly mentions that " Most beneficiaries have been accustomed to very humble posture regarding government officials and other persons with higher education and/ or social status. Beneficiaries are rarely qualified to offer sophisticated technical opinions..., they are unaccustomed to require compliance from government agencies, particularly if resistance is encountered from the agency ".

With this statement the audit explicitly tries to defame the mexican peasant and PIDER beneficiaries. We consider this as a very unfair position. We would recommend to exclude the complete paragraph.

F. Credit

Pages -44- Paras. 64 and 65. They present a distorted version of to -47- FIRA and BANRURAL, Para. 68. Repeats twice: " FIRA and BANRURAL have been under political pressure to increase lending to low income farmers " and " both institutions also have come under direct pressure from state officials eager that specific investment be made for political reasons ". This sounds the same.

III Concluding Remarks

Pages -50- Paras. 72. and 73. Only describe hypothesis on rural to -52- development and are used to show that the PIDER packages

were not effective (para 74.) nonetheless the
remarks are too fragile and do not contribute at all
to the understanding of the PIDER development.



MEXICO - LOAN 1110-ME

INTEGRATED RURAL-DEVELOPMENT PROJECT - PIDER I

PROJECT COMPLETION REPORT

Rural Development Division
Agriculture and Rural Development Department

MEXICO - LOAN 1110-ME
INTEGRATED RURAL DEVELOPMENT PROJECT - PIDER I
PROJECT COMPLETION REPORT

I. INTRODUCTION

1.01 Efforts at rural development in modern Mexico began in the 1930s with the intensified land reform campaign through which hundreds of thousands of hectares of land were redistributed to landless rural poor. Until the early 1970s, however, assistance for the development of this newly distributed ejido^{1/} land and the land of other small producers was limited to some credit and a few small-scale irrigation schemes. During the 1950s and 1960s, the government of Mexico gave priority to developing its commercial agricultural potential. With rapid expansion of irrigated area and introduction of new seed varieties, grain production increased at an average annual rate of 5% between 1950 and 1965. Most of this growth took place on large-scale irrigated and mechanized farms. In contrast, production on many ejidos and small farms in rainfed areas did not keep up with local population growth--leading to considerable emigration from rural areas.

1.02 In 1970, Government made a commitment to develop the potential of small farmers and to begin to redress the imbalance in rural income distribution. In pursuit of this objective, substantial resources were allocated to a number of schemes directed at raising incomes and improving basic services in the poorer rural areas of Mexico. At first, resources were channeled through existing programs based on two principal strategies: first, expansion of river basin development programs to provide packages of low-cost productive and social investments to small producers, and second, strengthening of rural development capabilities in a number of agencies. A third strategy, that of integrated rural development, was formulated in the early 1970s and embodied in the Program for Rural Development Investment (PIDER), established in 1973. The Integrated Rural Development Project - PIDER (hereafter PIDER I), for which a World Bank loan of US\$110 million (L#1110-ME) was approved on May 5, 1975, was distinguished from earlier

^{1/} The term ejido is derived from the Spanish equivalent of the village "common". In present Mexican law, the ejido is basically a group of families with joint--and inalienable--rights of usufruct to land. The head of such a family is called an ejidatario. Ejidos accounted in 1979 for 60 million ha, or 43% of Mexican farmland.

rural development projects in Mexico both in size and scope. Its objective was to finance investment in productive, support, and social infrastructure in areas with productive potential and a large proportion of rural poor population. PIDER was a departure from earlier strategies both in its integration of productive and social infrastructure investments and in its focus on small, well-defined areas throughout the country. The Mexican government requested Bank assistance for 30 micro-regions 1/ in order to get the program started. PIDER I was conceived of as the first of a series of Bank-assisted projects within the larger PIDER program. By the time the PIDER I loan became effective in October 1975, the PIDER program comprised 80 micro-regions (though investments for a number of these were still in the planning stage). A loan of US\$120 million to support investment in an additional 22 micro-regions was approved in 1977 for PIDER II, and one of US\$175 million was approved July 21, 1981 for PIDER III. By the end of 1981, the program as a whole was financing investments in 134 micro-regions, including the 52 which had received some IBRD assistance. PIDER I was expected to increase the productivity of about 120,000 producers and provide some 350,000 persons with improved access to social infrastructure.

1.03 As originally set up, the PIDER program was to be implemented by the respective agencies and ministries concerned with each component, and coordinated by the Ministry of the Presidency (Presidencia). The Loan Agreement between Nacional Financiera, S.A. (NAFINSA) and IBRD and the Guarantee Agreement between the United Mexican States and IBRD were signed on May 5, 1975, and became fully effective on October 29, 1975. In 1976, when President Lopez Portillo took office, Presidencia was eliminated as a ministry, and responsibility for the PIDER Program was placed under the newly created Ministry of Programming and Budgeting (SPP). The loan was fully disbursed on August 30, 1980, 20 months after the original closing date.

1.04 Prior to Board Presentation of PIDER I in 1975, 11 IBRD loans totaling US\$518.7 million had been approved for agricultural and rural development projects in Mexico. Loans for irrigation development accounted

1/ A "micro-region is defined as a subdivision of a state, with an average rural poor population of 50,000. Selection criteria balance poverty level (the program's aim is to reach low-income groups) with potential for income-increasing productive activites.

for 72% of total Bank lending in the sector, and agricultural credit for 28%. By FY82, another 14 IBRD loans totaling US\$1,626 million had been approved for agricultural and rural development in Mexico. Of this amount, 37% was for small-scale agriculture or rural development. The PIDER I and II loans together accounted for US\$230 million, or about 14% of total lending to the sector.

1.05 In Mexico, fiscal commitment to development of the small-scale agricultural sector and to the improvement of services in rural areas has continued to grow. By 1981, federal spending for these purposes exceeded US\$2,000 million equivalent annually. The PIDER program alone was channelling annually nearly US\$500 million to poor rural areas.

1.06 Subsequent to the establishment of the PIDER program, other funding programs have been set up utilizing various aspects of PIDER's experience, though not duplicating the integrated approach. A major effort to increase cropped area and productivity in the rainfed agricultural zones is underway. This program utilizes the recently created rainfed agricultural district structure to provide, in a timely manner, farm extension, demonstration, applied research, soil and water conservation, and credit services to farmers. A recent Bank loan (1945-ME, Rainfed Agricultural Development Project, US\$150 million) partially financed the strengthening of this program at the national level and intensive program implementation in nine of the 124 established districts. In those districts which coincide with PIDER micro-regions (the majority) the Rainfed District Chief takes a major role in planning agricultural investments, and is responsible for the extension, technical assistance, and applied research programs.^{1/} The growth of the Rainfed District Program with its particular focus on rainfed agricultural extension reflects the increasing awareness of the Mexican Government of the need for technical assistance specifically directed to small farmers. This recognition of the key role of extension in small farmer and rural development is partially due to the early experience of the PIDER program, and to the emphasis placed on extension by the Bank in the preparation of PIDER I (para 2.10).

1.07 Basic needs programs are also receiving much greater levels of funding. The Commission for Depressed Areas and Marginal Groups (COPLAMAR), was begun in 1977 to finance investments in social infrastructure of rural roads, potable water systems, health clinics, housing, and rural stores in selected zones with extremely limited production potential where programs such as the rainfed agricultural districts or integrated rural development would have little chance of success. COPLAMAR now has an annual budget of US\$1.7 billion.

1.08 This report is based on a review of Bank records, an ex post evaluation of PIDER I carried out by SPP Staff, and a completion mission in September/October 1981.

II. PROJECT IDENTIFICATION, PREPARATION, AND APPRAISAL

2.01 The proposal submitted by the Mexican Government in 1973 envisioned a program of size and scope rather greater than usual in either

^{1/} The nine IBRD-assisted Rainfed Districts do not coincide with IBRD-assisted PIDER micro-regions.

Bank or Mexican experience. Yet, if carefully planned and executed, the program promised to be the most important effort to develop small-farmer potential and improve the quality of rural life in Mexico to date. The fact that the proposal was of Mexican origin was considered an important factor adding to the program's prospects for success. However, the type of dialogue anticipated between the Government and the Bank in preparation and appraisal of the "project" was predicted to require more time and manpower than the average Bank-assisted agricultural project. For these reasons, a decision was taken soon after identification that the process of preparation and appraisal would not be rushed through; it was thought that the gain in significant contribution to the formulation of such a program was worth devoting the manpower and time required.

2.02 A number of issues were raised early on in the preparation phase of the "project" (the Bank-assisted portion of the program) which were followed through appraisal and implementation. The Bank's pursuit of these issues over the years of its association with PIDER through assistance to specific micro-regions has influenced the evolution of the program as a whole. For greater clarity, the two-year process of preparation and appraisal is here summarized according to the salient issues treated.

Issues Related to Size, Scope, and Nature of Program.

2.03 The unusual size, scope, and nature of the PIDER program raised a number of questions regarding both program strategy and the role of IBRD in that strategy. It became evident early on in "project" identification that Government's expectation was that the loan would be treated as a program loan, without the usual requirements of detailed evaluation and supervision which project loans implied.^{1/} While acknowledging that PIDER I would be an unusual project in many respects, it was precisely the unprecedented size and scope of the program which led to the decision in the Bank that the Bank could better contribute to the success of the program through the higher input of technical assistance and supervision of a project loan.^{2/} It was recognized, nevertheless, that supervision of such a project would require more than average manpower input from the Bank.

2.04 Similar issues arose in deciding the appropriate strategy and methodology for appraisal. It was decided that a detailed evaluation of the plan for each component would be carried out by Bank specialists. On the other hand, detailed appraisal of all 30 micro-regions would clearly be impractical. It was thought that more would be gained by appraising a representative selection of micro-regions in a first round, discussing with the Mexican team recommendations for improvements to the methodology used in developing and analyzing the micro-regional plans, so that the revised methodology could be applied to the evaluation of the remaining micro-regions of PIDER I, and, eventually, to all micro-regions as they were added to the PIDER program. Approval of the revised plans would then be a condition of disbursement for the respective micro-regions.

2.05 The problem of selecting a sample of micro-regions representative of the whole was approached through dividing the country into six

^{1/} Report on General Mission (Alter, 3/73).

^{2/} Letter to NAFINSA (Alter, 5/30/73); O.M. (6/1/73, 7/25/73).

ecological macro-zones. One micro-region from each zone was appraised in the first round, the rest in later stages.

2.06 The final areas of special importance due to the size and complexity of the program were the institutional arrangements (and manpower availability) for administration of the program. The Mexican plan specified that execution of each component would be carried out by the agency directly concerned with that activity. For example, construction of irrigation sub-projects would be the responsibility of the Secretariat of Hydraulic Resources. Agencies would also participate in planning the respective components. Coordination of the various agencies' activities and overall strategy was to be the responsibility of the Presidencia Working Group (PWG) assigned to the development and administration of the PIDER program. Two constraints to the effectiveness of these arrangements were the manpower available to the PWG and the authority which the PWG could exercise to coordinate program execution. Bank missions noted that the Working Group staff was committed and enthusiastic, but few in number, relative to the task, and generally young and inexperienced. Bank staff were concerned that this would lead to management problems when implementation was underway. A related concern was the capacity to carry out monitoring and evaluation for the program, if those functions were to be added to the responsibilities of the program's administrative staff.

2.07 An organizational framework for program administration was set up at federal, state, and local levels, giving Presidencia exclusive authority for planning, coordinating, and supervising all government activities within PIDER micro-regions. Because of the fact that the PIDER program had been established by mandate of the President, this framework was considered to endow the PWG with sufficient authority to carry out program objectives.

2.08 The concern regarding the establishment of an effective monitoring and evaluation system was satisfied by the founding of the Research Center for Rural Development (CIDER), whose purpose was in part to carry out ex post evaluations in PIDER micro-regions. While organized within Presidencia, CIDER was managed independently of the PWG.

Issues Related to the Integrated Concept and Other Issues

2.09 The original concept of the Mexican proposal was to provide physical infrastructure through public grant, thereby eliminating what were perceived as the most important bottlenecks to development of rural productive potential. Complementary services, such as extension and credit, were not the primary focus of the program, though recognized as important elements in development. From an early stage in the dialogue carried on throughout the preparation of the Bank-assisted project, the Bank insisted on incorporating software components (i.e. agricultural extension, credit, and farmer organization and training) as part of the project and on strengthening the linkages between the physical and software components. Government policy in this regard was to use program resources to provide beneficiaries with the minimum collateral (i.e. on-farm infrastructure, such as irrigation works, corrals, and so forth) necessary to borrow and to plan for credit in a second, or "expansion" phase. The Bank considered it crucial to the achievement of production and income objectives that planning for credit requirements be included in investment programming. Finally, government agreed to include credit agencies in the

planning stages and to include a credit component in the Bank-assisted project.^{1/} The degree to which credit agencies were actually involved as an integral part of planning, however, remained a concern throughout implementation.

2.10 As with credit, the Bank judged that greater attention should be given to providing extension assistance to farmers receiving program investments. Government agreed to set up a committee composed primarily of technicians from Presidencia, and the Secretariat of Agriculture and Livestock (SAG), to draw up a proposal for a working plan to improve the extension program.^{2/} Since the proposal was not complete by negotiations in April 1975, the Bank's approval of a completed proposal was made a condition of effectiveness.^{3/}

2.11 A third issue addressed during preparation and appraisal was that of cost recovery. As mentioned above, government's policy with respect to the PIDER program was to provide infrastructure through grant, while the Bank was concerned that beneficiaries help to finance some on-farm investments themselves. Taking into consideration the very low income levels of the beneficiaries, a repayment schedule was worked out according to the degree of profitability, amount of capital investment, and timing of benefits projected. The final agreements projected that between 30% and 50% of total costs would be recoverable. Estimates were based on the following breakdown: 100% of medium- and short-term credit (30% of project cost); 100% of marketing and electrification investments (6.4% of base cost) would be recoverable through user charges; 100% of beekeeping investments (.5% of base cost) through direct repayment; and up to 30% of livestock, irrigation, and fruit development (20% of base cost) would be recoverable through either direct repayment obligations or user charges. The last levels were set in accordance with Mexican law applying to irrigation investments. The criteria for establishing the amount to be repaid in each case was to be their ability to pay balanced with the need to maintain an incentive to make best use of land and water available to them. In addition, beneficiaries were required to make a contribution in cash, kind, or labor to health, education, and rural water supply investments and were to be responsible for 100% of maintenance and operating costs of productive investments and for full operating costs of marketing, electricity, rural water supply, and self-help projects. ^{4/}

2.12 Negotiations were held from April 2-11, 1975. The significant changes resulting from negotiations were as follows:

- (a) A component for financing rural industries was deleted at the request of the Mexican delegation on the grounds that the institutions which were to handle the program were not sufficiently prepared.
- (b) The ceiling for local competitive bidding was raised from 30 to 67% of the total cost of goods and services.

^{1/} Report on general mission (Alter, S/73); Office Memorandum, Minutes of Meeting in Mexico (Scott, 8/73).

^{2/} Supervision Report, 9/11/75.

^{3/} Minutes of negotiations, 4/21/75.

^{4/} Office Memoranda (9/21/73, 1/14/74); Guarantee Agreement, pp.5-7 (5/22/75); SAR, pp.26-27 (4/16/75).

- (c) It was agreed that investments could be planned on the basis of model ejido budgets, since the manpower requirements for planning a separate budget for each ejido or village would be excessive.
- (d) Per capita investment ceilings were raised from average cost estimates to upper range limits to allow flexibility in budgeting.
- (e) It was agreed that the controllers of individual agencies would conduct annual audits and submit their reports to the Bank.
- (f) At the request of the Mexican delegation, it was decided that the Bank would not finance the Evaluation component, though the covenants related to that component were accepted.^{1/}

2.13 The minutes of negotiations indicate that the Mexican delegation clearly regarded the loan along the lines of a program loan, and requested waiving of Bank approval of individual plans. However, the Bank insisted that Bank financing of individual micro-regions would be conditional on approval of the respective micro-region plans. In addition, submission of an acceptable plan to improve the extension/demonstration programs were made a condition of effectiveness.

Board Approval and Loan Agreements

2.14 On May 8, 1975, a loan of US\$110 million was approved by the Board of Directors; the loan documents were signed on May 22. The loan was to be effective August 29, 1975, pending fulfillment of conditions, in particular the submission of an operational plan for extension. This date was subsequently extended to October 29 to allow revision of the operational plan.^{2/}

III. PROJECT DESCRIPTION AND APPRAISAL ESTIMATES

3.01 As approved and agreed upon, the project was to assist the implementation of investment plans in 30 micro-regions with a rural population of 1.5 million. The project was designed to support investments in the following categories:

- (a) Directly Productive (66%), including small-scale irrigation development and rehabilitation; soil and water conservation; livestock infrastructure and pasture improvement; and credit for purchase of livestock, equipment, and other materials necessary for operation of infrastructure investments.
- (b) Productive Support (22%), including feeder roads, extension

1/ Office Memorandum (4/21/75)

2/ Office Memorandum (9/23/75)

of the national electrical network, and construction of storage and marketing facilities. In addition, the project was to support development and provision of improved extension service, and organization and training of farmer groups.

- (c) Social Infrastructure (12%), including construction of primary schools, small rural health centers and drinking water systems, and provision of materials for self-help village improvement projects.

In addition, the project was to support the activities of the new Center for Rural Development Research (CIDER) which would carry out, inter alia, project-related evaluation and research.

Physical Targets

3.02 Table 3.1 shows appraisal estimates of physical targets for 16 components in 30 micro-regions over the three-year project period. Estimates were made on the basis of a review of 15 micro-regional plans, extrapolating for the other 15. Targets for the medium-term (three-year) investment plans were approximate; specific targets would be set yearly when budgeting for individual sub-projects was done.

Project Impact - Production and Benefits

3.03 Estimates were made of the benefits expected to accrue to project beneficiaries when investments financed under the project were completed and began to operate. Estimated yield increases were based on field trials and experience under similar ecological conditions in Mexico, given improvements in land preparation and cultivation practices, irrigation and/or moisture control, and increased use of improved seeds, fertilizers, and pesticides. A development period of eight years was assumed. Appraisal estimates of average yield increases for major crops expected to result from project actions are shown in Table 3.2.

Table 3.2 Appraisal Yield Estimates

	<u>Unit</u>	<u>Before Development</u>	<u>At Full Development</u>
<u>Maize</u> (irrigated in semi-arid area)	kg/ha	750	2,500
<u>Beans</u> (irrigated and interplanted with maize in semi-arid area)	kg/ha	200	500
<u>Maize</u> (1,200 mm rainfall)	kg/ha	1,200	1,700
<u>Beans</u> (1,200 mm rainfall and interplanted)	kg/ha	300	400
<u>Maize</u> (800 mm rainfall)	kg/ha	850	1,100

SOURCE: SAR, p. 24

Table 3.1 Integrated Rural Development Project - PIDER
Type and Distribution of Project Investments

		Unit	Units Served	Unit Cost (US\$)	Total Investment (US\$ Million)
I. Directly Productive Total					
A.	<u>Infrastructure</u>				<u>75</u>
	Livestock	no.	800	26,000	<u>21</u>
	Irrigation	ha	30,000	1,200	<u>35</u>
	Soil and Water Conservation	ha	91,000	104	<u>10</u>
	Beekeeping		-	-	<u>1</u>
	Fruit Production	ha	9,500	650	<u>6</u>
	Forestry and Fisheries		-	-	<u>2</u>
B.	<u>Credit</u>				<u>64</u>
	1. Development Credit				
	Cattle & Irrigation Support		-	-	<u>27</u>
	Fruit Production	ha	75,000	250	<u>19</u>
	2. Incremental Seasonal Production Credit	ha	120,000	150	<u>18</u>
II. Productive Support, Total					
	Feeder Roads	km	1,900	6,800	<u>13</u>
	Demonstration and Extension	no. of staff	400	-	<u>15</u>
	Farmer Organization	no. of staff	250	-	<u>6</u>
	Marketing	markets/stores	65	14,000	<u>1</u>
	Electrification	persons	160,000	85	<u>12</u>
III. Social Infrastructure, Total					
	Health Centers and Posts	no.	290	11,000	<u>3</u>
	Primary Education	classrooms	1,150	5,000	<u>6</u>
	Drinking Water	persons	170,000	75	<u>13</u>
	Self-Help Projects	persons	85,000	40	<u>3</u>
IV. Evaluation					
V. Total Base Line Cost					
	<u>Contingencies</u>				
	Physical		-	-	<u>15</u>
	Price		-	-	<u>68</u>
VI. Total Project Cost					
			-	-	<u>295</u>

Source: Staff Appraisal Report, April 16, 1975, p.9

3.04 After a development period of about eight years these yields would lead to the increases in production levels shown in Table 3.3. By the end of the eight-year development period, increased levels of production were expected to raise real farmer incomes for about 120,000 producers from an average of US\$440 per farm to US\$700 per farm for rainfed areas and to US\$1,000 per farm benefitting from new irrigation works.

Table 3.3 Appraisal Production Estimates

	Base-year Production	Incremental Production	Incremental Marketed Surplus 1,000 tons
<hr/>			
<u>Maize</u>			
Irrigated	-	60	40
Rainfed	1,100	140	70
<u>Beans</u>	70	40	20
<u>Beef</u>	90	25	20
<u>Fruits and Vegetables</u>	40	10	5

Source: SAR p.25.

Cost and Financing

3.05 Project costs were estimated at US\$295 million, including contingencies, which represented about 39% of base cost. At the prevailing exchange rate of Mex\$12.5 per US\$1, costs in local currency were estimated at Mex\$3,682 million. Foreign exchange costs were estimated at US\$50

million, or 17% of base cost. Development credit and incremental production credit accounted for about 21% and 9% respectively of base cost, and evaluation accounted for .3% (less than US\$1 million). No separate estimate was made for project management costs.

3.06 An average of 37% of total project costs was to be financed by the Bank loan of US\$110 million. The Bank would not finance seasonal production credit or the evaluation component. The disbursement percentage for all eligible project costs was to be 40%, except for development credit, which was to be 48%. The remaining costs were to be shared by Government and beneficiaries, as shown in Table 3.4. Government's share was to be US\$178 million (61%) and beneficiaries share, US\$7 million (2%).

IV. PROJECT IMPLEMENTATION

4.01 The loan was forecast to be fully disbursed in three years; in fact, disbursement took nearly five years (see Annex II). Though investments proceeded on or ahead of schedule in the first year, a series of administrative changes, beginning with the inauguration of a new Presidential administration in December 1976, interrupted progress for a number of months. The new President eliminated the Ministry of the Presidency (under which PIDER had been administered), and set up a new Ministry (Programming and Budgeting) in its place. Management of the PIDER program was placed under this new Ministry (SPP), and, though Presidential support continued and budgetary allocations grew, there ensued a period of uncertain leadership which adversely affected both execution of the project itself and the administrative work necessary to report expenditures for reimbursement from IBRD.

Project Cost and Financing

4.02 The project was designed so that the thousands of actual sub-projects would be identified, planned, and executed during implementation; accordingly, the sectoral breakdown of appraisal estimates was necessarily indicative. Actual and estimated costs can therefore only be compared on an individual sub-project basis. It is clear, however, that international and domestic inflation, the major devaluation of the peso in 1976, and the unsettled economic conditions in Mexico which accompanied the devaluation had adverse effects on cost. The price escalation factors which had been allowed in appraisal estimates were substantially lower in many areas than the increases in unit costs which actually occurred. Inflation totalled 169% during the 1975-79 period in Mexico.^{1/} Nevertheless, unit costs were not uniformly higher than appraisal estimates, as shown in Table 4.1.

4.03 The most drastic price disturbance appears to have occurred as a result of the devaluation in August/September 1976, when the value of the peso fell from Mex\$12.5/US\$ to Mex\$26/US\$. Though it later stabilized around Mex\$23/US\$, foreign exchange costs (accounting for 17% of appraisal

^{1/} IBRD, Report No.3605-ME: Mexico: Development Strategy - Prospects and Problems. August 31, 1981, p. 112.

Table 3.4: Government and Beneficiary Share in Project Planning:
Appraisal Estimates

Components	Beneficiaries		Government	
	Amount	%	Amount	%
US\$ millions				
Project Cost				
A. Infrastructure	0	0	45	60
B. Development Credit	2	5	23	47 <u>a/</u>
C. Incremental Seasonal Production Credit	-	-	18	100
Productive Support	2	4	29	60
Social Infrastructure	1	4	13	52
Evaluation	-	-	1	100
Contingencies	2	3	49	60
Share in Total Project Cost	7	2	178	61

a/ Participating banks 10%, Government 37%

Source: SAR, p18.

Table 4.1

Table 4.1 MEXICO: Integrated Rural Development Project--PIIDER I
Unit Costs
Average for 30 Micro-Regions
(U.S. Dollars)

	Appraisal Estimates						Actual					
	Physical Targets		Beneficiaries		Unit Costs		Physical Targets		Beneficiaries		Unit Costs	
	Units	Unit Cost (1975 Prices)	Units	Unit Cost (1975 Prices)	Units	Unit Cost (Current Prices)	Units	Unit Cost (Current Prices)	Units	Unit Cost (Current Prices)	Units	Unit Cost (Current Prices)
Directly Productive												
Irrigation	ha	1,200	Producer	4,000 1/	ha	907	Producer	2,018				
Soil and Water Conservation	ha	104	Producer	n.a.	ha	85	Producer	335				
Fruit Crop Development	ha	650	Producer	n.a.	ha	1,267	Producer	943				
Livestock	Unit	26,000		n.a.	Unit	30,988 2/	Producer	355				
Productive Support												
Feeder Roads	Km	6,800	Person	n.a.	Km	6,270	Person	61				
Rural Electrification	Km	n.a.	Person	85	Km	14,035	Person	62				
Rural Marketing												
Silos												
Stores												
Extension												
Livestock												
Agriculture	ha	n.a.	Producer	n.a.	Head/cattle	28	Producers	251				
		15		75	ha	15	Producer	62				
Social Infrastructure												
Classrooms	Unit	(1150)	Pupil	130 1/	Units	(1612)	Pupil	105				
Health Centers	Unit	(290)	Person	41 1/	Units	(277)	Person	74				
Rural Water Supply			Person	66 1/	Systems	(762)	Person	41				
Self-help Materials			Person	56 1/	Village	3,000	Person	80				

1/ SPP estimates based on yearly budgeting.

2/ Average of all types; unit costs for beef and dairy units significantly higher.

3/ For 5 warehouses/silos of 900 ton capacity each.

Source: SAR, April 16, 1975, p. 9; SPP, Evaluacion del Credito 1110-ME; December 23, 1981.

base cost estimates) were virtually doubled. Both the policies leading up to the devaluation and the compensatory price changes made by individual firms immediately afterwards contributed to accelerated domestic inflation. These changes occurred unevenly in the economy, however, and it is possible that, rather than causing uniform project cost increases, the principal effect of devaluation was to slow down dollar disbursements. This was a concern of supervision missions at the time.

Physical Targets

4.04 Table 4.2 shows a comparison of physical infrastructure targeted at appraisal with that built during the project period. In most cases, targets were achieved or exceeded. Notable examples of the latter are irrigation, soil and water conservation, and feeder roads, under which physical achievement as a proportion of appraisal estimate was 161%, 250% and 254%, respectively. (It should be noted that works which were incomplete in 1979 have not been counted with project benefits, nor have persons benefitting from those works been counted as project beneficiaries.) Evaluation of physical performance is not possible for some components, for which no specific targets were specified at appraisal (for example, forestry, fisheries, and livestock sub-components). In the case of some social infrastructure components (rural water supply and self-help projects), units of measure estimated at appraisal do not correspond to units of measure used to monitor and evaluate project progress.

Problems Encountered in Implementation

4.05 Observations regarding expenditure and/or target shortfalls in the group of six micro-regions illustrate the experience and the types of problems which occurred during implementation in all 30 micro-regions (See Annex I). Components which consisted largely of purchase or provision of materials showed expenditures close to 100% of authorized budget. Those which involved public civil works (roads, electrification, schools, etc.) also showed expenditures close to budget, though in many cases, physical targets were not fully achieved. One reason for this was the fact that the fiscal year was out of phase with the seasons: by the time the budget was approved in March or April, the dry season was nearly over. Construction then had to be delayed until September, resulting in increased material and labor costs. Since agencies could not overspend their authorized budgets, the final effect at year end was generally failure to achieve physical targets, though in many cases the lost construction time also resulted in less spending than authorized. This problem has since been solved through new regulations under which the annual budgetary process begins in July at the State level, and through the Acuerdo de Secas of 1979, under which funds for January through March are authorized by November 15, and actual transfer to the states takes place prior to January 15.

4.06 The greatest problem was encountered in implementing on-farm productive sub-projects. The principal reasons for delays or shortfalls in this type of investment fall into three major categories, though they often appeared in combination with each other: beneficiary organization, adaptive research and extension, and credit. First, the issues related to beneficiary organization center around communication between program-coordinating and line-agency personnel on the one hand, and the

Table 4.2

TABLE 4.2 PHYSICAL TARGETS: ACHIEVED AND APPRAISAL ESTIMATES

	Units	Appraisal Estimate	Actual Achievement			Capacity	
			Number of Works		Units	Achieved	
			Finished & Operating	Finished Not Yet Operating			
Directly Productive							
Irrigation	ha	30,000	566	36	85	ha	48,340
Soil and Water Conservation	ha	91,000	251	20	6	ha	227,650
Fruit Crop Development,							
Forestry, Fisheries							
a. Orchard Establishment	ha	9,500 ^{2/}	209	52	111	ha	8,285 ^{2/}
b. Coffee Development	-	-	1	0	52	-	-
c. Forestry	n.a.	^{1/}	43	0	0	n.a.	n.a.
d. Fisheries	n.a.	^{1/}	21	0	1	n.a.	n.a.
Livestock Infrastructure	No. Units	800	778 ^{3/}	106 ^{3/}	106 ^{3/}		
a. Beef and Dairy	-	-	276	13	54	Head	78,057
b. Goats	-	-	76	43	13	Head	35,977
c. Sheep	-	-	16	7	7	Head	402
d. Pigs	-	-	28	19	7	Head ^{4/}	4,436
e. Poultry	-	-	17	0	4	Birds	128,227
f. Rabbits	-	-	19	0	0	Rabbits ^{4/}	29,566
g. Water Storage for Livestock & Domestic use	-	-	347	24	21	Head	164,287
h. Beekeeping	n.a.	^{1/}	336	34	5	Hives	23,467
Credit							
a. Development Credit	ha	75,000	-	-	-	n.a.	n.a.
b. Seasonal Credit	ha	120,000	-	-	-	n.a.	n.a.
Productive Support							
Feeder Roads	Km	1,900	589	36	33	Km	4,824
Rural Electrification	Persons	160,000	563	20	0	Km	1,139.5
Marketing	Stores/Warehouses	65	70	3	21	Tons Cap.	10,050
Extension	No. of Staff	400	-	-	-	ha	1,422,156
Former Organization	No. of Staff	250	-	-	-	Ejidos	1,230
Social Infrastructure							
Health Centers	No.	290	235	22	46	No.	²⁵⁷ _{6/}
Primary Education	Classrooms	1,150	983	12	10	Classrooms	^{1,612} _{7/}
Drinking Water	Persons	170,000	694	68	31	Persons	428,260
Self-help Projects	Persons	85,000	1,284	3	0		48,340

^{1/} No appraisal estimate^{2/} Group fruit and coffee development together.^{3/} Sum do not include beekeeping (no appraisal estimate for beekeeping).^{4/} Estimate is for annual production capacity.^{5/} Appraisal estimate units not comparable.^{6/} Includes 115 Health Centers averaging 4 beds each, and 342 Day Clinics.^{7/} Average capacity 52 students.

Sources: SAR, p. 9; SPP, Evaluacion del Credito 1110-ME, Dec. 23, 1981

beneficiaries themselves on the other. In order to be motivated to form and maintain organized groups, to contribute what was expected, and to properly maintain and operate on-farm infrastructure, beneficiaries had to be well informed regarding what the project would involve, what benefits could be expected and over what timespan, and what would be required of them, both during the construction phase and later on during the operating phase. In the early years of the PIDER program, however, the importance of communication with the beneficiaries was not always clearly recognized by those working at field level. A number of state representatives interviewed emphasized the need for training personnel to listen and respect the concerns of beneficiaries as well as to explain thoroughly the benefits and costs of the alternative sub-projects. Since dialogue with beneficiaries broke down in many cases, the fact that a given beneficiary group disintegrated by the time construction was complete was often not recognized until the time came to put the work into operation (e.g. see para 4.09). For the same reason, true participation of the beneficiaries in the various phases of sub-project life was impossible. That is, since they had not been thoroughly informed, nor, in many cases, given a choice of investments, they often considered the works to be the government's property, and, therefore, the government's responsibility.^{1/}

4.07 A second category of factors which were crucial to making productive investments operational are those relating to technical assistance: availability of well-adapted technical packages, timely delivery of inputs, and adequate provision of assistance itself. The importance of the first factor was emphasized at appraisal, and the condition of effectiveness regarding extension (para 2.13) was a result of recognition of the need for better-adapted technical packages. The program of applied research was less successful in development of technical packages suitable to the conditions and existing levels of technology on ejidos and small farms than had been hoped. An example of this type of technical problem is that encountered by CONAFRUT in a number of regions with its program of orchard establishment. That is, though the general type of tree or plant chosen was known to grow well in the area, it was found that the specific variety chosen (of peaches, apples, etc.) did not adapt well to local conditions. Thus, efforts to improve on local varieties were frustrated. A similar result was experienced by BANRURAL in its efforts to introduce improved breeds of livestock in many areas. Though the beneficiaries were insured against mortality of new stock, their initial experiences with technological change were discouraging. In some cases the package itself was judged adequate and advice to the producers appropriate, but delivery of the critical elements was not timely. The most common example is that of the delivery of fertilizer or seed too late for proper application.

4.08 Technical assistance was provided by a number of agencies. SARH provided extension service for general agriculture, CONAFRUT for fruit crops, INMECAFE for coffee, and both SARH and BANRURAL for livestock. The effectiveness of the assistance programs varied among these agencies, and within each agency, the quality of technical assistance programs varied

^{1/} SPP officials have recognized that the success of the program depends on establishing procedures which will facilitate effective communication with beneficiaries and will integrate their participation into all phases of project implementation, from planning through productive operation (see paras 5.11 and 6.02).

from state to state. According to SPP representatives, the number and quality of agents which an agency had on its staff and the quality of supervision of the agents depended on the state-level agency's emphasis on small farmer production and on the relative difficulty of conditions in the state. Officials commented on the difficulty of attracting and keeping well-qualified staff in the more remote and poorer areas. A few examples were cited illustrating the problems that inadequate technical staffing can cause. In one state, the BANRURAL veterinarian responsible for assisting the pig units left suddenly. In the three-week period before he could be replaced, an out-break of porcine cholera (with which the beneficiaries had had no previous experience) had caused substantial stock losses.

4.09 The third category, that of credit availability, relates to both of the others, and presents problems which are among the most difficult to solve. In many cases, timely provision of adequate credit required coordination among several entities (e.g. SARH, contractors, and BANRURAL), as well as clear communication with beneficiaries. BANRURAL regulations sometimes seemed to undermine the efficient delivery of credit, however. For example, beneficiaries of land clearing were not allowed to apply for credit for improved seed and fertilizer until the BANRURAL agent had verified that the work was complete. Often, by the time the approval process was complete and credit was granted, it was too late for planting, one crop cycle was lost, and the field preparation had to be redone for the next cycle.

4.10 Among livestock sub-projects are numerous examples which illustrate the types of difficulties encountered in provision of credit. The executing agency for such projects was usually BANRURAL, which was responsible for construction, stocking (credit), and providing technical assistance. Before plans for such sub-projects were approved for PIDER financing, a letter of commitment for necessary credit from BANRURAL was required. This in turn required that the group of beneficiaries who would be responsible for the operation be organized (i.e., each member must sign a letter confirming his interest in participating), and the ejido must have no defaulted debts. In a number of cases, once the unit was ready to be stocked, some of the original group of beneficiaries had moved away or lost interest. Before BANRURAL would go forward with the project, a new group had to be organized. In other cases, during the time between the planning of the project and the completion of construction (at least several crop cycles), the ejido or group had defaulted on short-term production loans.

4.11 In summary, the major problems which arose during implementation of PIDER I highlight the importance of the elements upon which the Bank had insisted from the beginning. Organization of beneficiaries, development of clear communication with them, and inclusion of beneficiaries in an active participatory role from the early planning stages were crucial to even the construction of works. In addition to these, availability of suitable technical packages, and the timely provision of adequate technical assistance and credit were essential to the operation of sub-projects, upon which expected production and income benefits ultimately depended.

Cost Recovery

4.12 One of the issues given special attention at appraisal was the set of arrangements to be made by the Government of Mexico to assure

beneficiary contribution to investment costs and responsibility for operating and maintenance costs (para 2.11). Arrangements were specified in the formal loan agreements 1/ and supervision missions attempted to verify compliance with those agreements. In general, it was found that, where beneficiary contribution was in the form of materials or land (e.g. for building site of a health center), contribution was required on a regular basis. Where beneficiaries were asked to contribute labor, it was found that Government policy was to pay them at the rate of one-half the official Minimum Daily Wage. However, it was often difficult to verify actual numbers of days worked by beneficiaries. In some areas, contractors preferred not to employ beneficiaries, for a number of reasons, including their belief that the work went faster (and costs were therefore minimized) by employment of permanent work crews. Use of beneficiary labor tended to be greater in more remote areas.

4.13 Compliance with agreements regarding water charges (which were to cover maintenance as well as operating costs) were generally reported unsatisfactory, but in line with national policy. It was impossible to verify the record of PIDER beneficiaries with respect to loan repayment, as that data was not kept by FIRA (an arm of BANXICO, the signatory of the Project Agreement). In any event, most medium-term loans were not yet due for full repayment by the end of the project period.

Project Impact

A. Beneficiaries

4.14 SPP estimates indicate that between 150,000 and 170,000 producers have benefitted from directly productive investments made under PIDER I, compared with appraisal estimates of 120,000 (para 3.04). The wide margin allows for fluctuation in the size of beneficiary groups and for the fact that in some cases, the same group may benefit from more than one type of investment. For example, a sub-project for fruit crop development may utilize part of a small-scale irrigation scheme also financed under the project. For the same reason, it is not possible to sum all the beneficiaries of productive support or social infrastructure components. Table 4.4 shows the total number of beneficiaries by component.

B. Employment Generated

4.15 In addition to those producers benefitting most from project investments due to their ownership of land use rights, it was estimated at appraisal that some 84,000 man-years of work would be required during the construction phase of all three categories of investments and approximately 30,000 permanent jobs would be created in the operating phase of productive investments. During the four-year project period, it is estimated that total temporary employment generated was about 6,800 man-years equivalent. Monitoring during the execution of works counted employment generated in terms of man-days rather than man-years, since construction work was not steady, due to weather and other external factors. SPP estimated total number of temporary man-days generated were 1,088,450, and a conversion factor of 160 man-days per man-year has been used for the sake of comparison. 2/ Much of the labor-demand created by construction of project-financed works is obviously highly seasonal; therefore the analysis

1/ Guarantee Agreement, Article III.

2/ SPP, Evaluacion del Credito 1110-ME, Dec. 23, 1981.

Table 4.4 MEXICO: Integrated Rural Development Project - PIDER I
Beneficiaries

	<u>Units</u>	<u>Total</u>
Irrigation	Producers	21,700
Soil and Water Conservation	Producers	57,390
Livestock Infrastructure	Producers	77,150
Fruit Crop Development (incl. forestry & fisheries)	Producers	11,140
Extension	Producers	335,680
Farmer Organization & Training 1/	Population 1/	602,000
Feeder Roads	Population	491,912
Rural Electrification	Producers	1,730
Rural Marketing	Population	258,000
Classroom Constructions	Producers 2/	18,330
Health Centers	Population 3/	121,340
Rural Water Supply	Pupils	83,420
Self-help Materials	Population	534,800
	Population	428,260
	Population	48,340

1/ Indicates number of people assisted annually.

2/ Beneficiaries of warehouse construction.

3/ Beneficiaries of Rural Stores

Source: SPP, Evaluacion del Credito 1110-ME, December 23, 1981

of equivalent man-years ought not to be pushed too far.

4.16 A similar difficulty occurs in comparing permanent "jobs created" with appraisal estimates. The case of livestock is the only one for which it can be said that a given number of persons per unit have been provided with permanent, full-time jobs. In the case of irrigation, soil and water conservation, and fruit crop development, incremental labor required is of a seasonal nature. Even for livestock sub-projects some seasonal work is required for maintenance of infrastructure. Thus, estimates of permanent employment generated were done on the basis of man-days per year of incremental labor required for the operation of productive investments. Total number of permanent annual man-days generated is about 10,900,000 which breaks down as follows: about 5 million each for maintenance and cultivation of newly irrigated land, and land improved or newly cleared under the soil and water conservation component; about 200,000 for operation and maintenance of new livestock units and infrastructure; and about 700,000 for maintenance and cultivation of new orchards or coffee groves 1/. Again, for the sake of comparison, division by 160 gives some 68,100 man-years equivalent.

C. Production and Income

4.17 By the end of the 1981 cropping cycle, a number of the sub-projects financed under PIDER I were not yet operating--either because construction had just been completed (though begun in 1979), or because they lacked credit for some essential element. Others, particularly fruits and other perennials, were operating, but had not yet reached productive maturity. Most orchards planted in 1979 would not begin to yield fruit in marketable quantities until 1984 or later. In addition, experience during implementation showed that appraisal expectations regarding development of technical packages, provision of extension service, and rates at which beneficiaries were able to assimilate and adopt new technologies were overly optimistic (paras 3.03-3.04). For these reasons, it appears that the development period of eight years assumed at appraisal is unrealistically short, considering both the nature of activities and the characteristics of the beneficiaries of this type of project 2/. It was also discovered during implementation that average baseline yields estimated at appraisal were higher than real average yields of PIDER beneficiaries. This was probably due to the fact that the original data were based on area-wide averages, and included data for some medium- to large-scale farms. For the six micro-regions considered in detail, production flows were re-estimated using statistically reported yields for the period 1975-80. Table 4.5 shows yield and production figures, comparing appraisal estimates, reported baseline and 1980 figures, and those currently projected for 1990.

4.18 Real incomes have paralleled the slower-than-expected increases in production. Family income was expected to double in eight years from an average of US\$440 equivalent. Based on current production levels, it is

1/ Ibid

2/ The same conclusion was drawn in the Mid-Term Evaluation Report, paras 3.07-3.08.

Table 4.5a. Yields: Appraisal Estimates vs. Current Figures

Appraisal Estimate Yields			Rainfall Conditions	Current Estimates Range of average yields across 6 micro-regions		
Before Pider	Full Development	kg/ha	mm/yr	Before 1975-1979	1990	kg/ha
Crops						
Rainfed						
Maize (800mm rainfall)	850	1,100	(500-600)	200-450	580-640	900-1,200
Maize (1200mm rainfall)	1,200	1,700	(900-1,400)	600-900	820-900	2,000-3,000
Beans (1200mm rainfall)	300	400	(500-1,400)	100-300	340-500	600-1500
Irrigated (semi-arid area)						
Maize	750	2,500	(sole crop)	900	1,660	3,000
Beans (intercropped)	200	500		600	740	2,000

Table 4.5b. Production: Appraisal Estimates vs. Current Figures

	Base Year	Full Development	Inc. Prod.	Total for 30 micro-regions ^{1/}				Inc. Prod. 2/ tons	<u>1990</u>	<u>1980</u>	<u>1990</u>
				Baseyear	1980	Full Development					
		tons	tons			tons					
Maize	1,100,000	1,300,000	200,000	54,760	111,501	343,500	54,490	196,50			
Beans	70,000	110,000	40,000	9,030	25,20	65,010	15,990	39,99			
Fruits and Vegetables	40,000	50,000	10,000	9,600	19,200	124,830	5,640	109,41			
Beef	90,000	115,000	25,000	90,000	n.a.	95,900	-	5,90			

^{1/} Totals for 30 micro-regions extrapolated from totals for 6 micro-regions.

^{2/} Incremental production figures are not a direct reflection of yield changes, as cropping patterns have changed since base year.

Source: SAR, April 16, 1975, pp 24-25; SPP, Evaluacion del Credito 1110-ME.

now estimated that real family income for beneficiaries will reach an average of US\$1,440 equivalent by 1990. Some communities have already obtained substantial increases and have not only made improvements in their dwellings, clothes, and so forth, but have extended on-farm investments on their own account. Current average annual incomes of beneficiaries have increased by about US\$160 equivalent.

D. Economic Returns

4.19 At appraisal, economic rates of return were estimated for six micro-regions and varied from 11% to 23%, averaging 16%. Costs included all directly productive investments plus costs of extension, farmer organization, feeder roads, electrification, and marketing. Benefits were estimated for directly productive investments only. Shadow prices for labor were used, varying from 40% to 70% of the official minimum daily wage. It was estimated that the average rate of return would fall between 11% and 13%, if labor were valued at 100% of the official minimum daily wage ^{1/}.

4.20 The economic rate of return was re-estimated based on: reported benefits obtained through 1980, and projected through 1990; investment, operating and maintenance costs, for the same components as those considered at appraisal; constant 1975 prices for both costs and benefits; labor valued at 100% of the official minimum daily wage. The last assumption was made based on findings that the market wage in the project areas (and in most rural areas) was substantially higher than the official minimum daily wage. In addition, the strong tendency for workers to emigrate from many rural areas to seek higher wages suggests that labor should be evaluated in a context larger than the project areas in isolation. A 15-year development period was used for most components in recalculating benefit flows. For cost and benefit flows of 15 years, rates of return varied from 2% to 16% across micro-regions (6% for all six micro-regions taken together). The lower rates of return are largely due to delays in start-up of operation of livestock infrastructure and orchard development, and more gradual increases in output than had been assumed initially. For example, in Sinaloa, where livestock infrastructure was a substantial part of overall investment, start-up of operation and output was delayed in a number of livestock units for five years. The delayed benefit stream reduced the rate of return substantially (from 11% to 6%). In Yucatan, a substantial proportion of agricultural investment consisted of orchard development. Many of the orchards were planted in 1978-1979, and have not yet begun to produce marketable quantities of fruit. Considering this longer-term development period, and a 25-year stream of benefits and costs, rates of return vary from 11% to 20% (15% overall).

4.21 Since relatively heavy livestock investments appeared to be a major factor causing low rates of return in several micro-regions, separate calculations were made for crops only. These results varied from 4% to 21% (11% overall) for 15-year streams, and from 13% to 24% (16% overall) for 25-year streams.

V. INSTITUTIONAL DEVELOPMENT AND PERFORMANCE

5.01 The management structure of the PIDER program evolved during the

1/ SAR, p.29.

project period in response both to changes in Presidential administrations with accompanying major bureaucratic reorganizations and to changes within the program itself. In 1976, when President Lopez Portillo took office, the Secretariat of the Presidency, under which the PIDER program was organized and funded, was eliminated. In its place, a new Secretariat of Programming and Budgeting (SPP) was created, and management of PIDER placed within it. Under Presidencia, the program had been headed by a "Permanent Working Group," which, by virtue of its position within the bureaucracy, had the aura of a unique, strongly centralist cadre. This strong direction from the center was suited to the initial phase when planning and operating procedures had to be established and personnel trained. As the program grew, however, it was not only desirable but necessary to delegate many functions to the state level. This was done by giving major operational/coordinating responsibility to the state delegations of SPP. This policy was reinforced in 1978-79, when the administration of the program was moved from Regional Planning to the Office of the General Coordinator of State Delegations (both within SPP). A General Directorate of Integrated Rural Development was created, whose principal responsibility was the progress of the PIDER program.

5.02 Decentralization of the administration of PIDER was accompanied by a number of procedural innovations which have served to increase the efficiency of funding through the program at the same time that the bureaucratic machinery was growing. One of the most important of these was the shift of disbursement authority from Mexico City to the SPP State Delegate in 1977. The procedure had been initiated in a few states in 1974 on an experimental basis. The new procedure involved authorization of a payment voucher on the basis of a check of field supervision reports against a contractor's or agency's invoice. The payment voucher was then given to the contractor who could cash it directly at the local branch of the Bank of Mexico. A PIDER account was established with the bank in each state, based on annual budgetary authorizations. This new procedure resulted in a payment process several times faster than that of programs with centrally authorized payment systems. There was evidence that this in turn resulted in some project cost savings, since contractors were often willing to lower their costs when they were not obliged to wait many months for payment. In addition, it was felt that by exercising disbursement authority, the state coordinator was able to exert greater quality control over construction work funded by the program. 1/

Program and Agency Coordination

5.03 Experience during project implementation made clear the crucial importance of effective coordination among executing agencies to both the construction and operation of investments (paras 4.06-4.11). Various types of problems stemming from lack of effective coordination were identified during the project period, and attempts were made to discover ways to coordinate agency actions more effectively.2/ Not only were coordination mechanisms examined, but the organizational structure of the administration

1/ IBRD, Mexico: Rural Development Project -- PIDER I: Mid-Term Evaluation Report, August, 1979, pp.20-21.

2/ Ibid

of the program was re-evaluated in an effort to accomplish this goal. Actions taken on the basis of this re-evaluation affect PIDER II and III (para 6.03).

5.04 Until early 1976, coordination of the PIDER program was to be accomplished at the federal and state levels by PIDER Coordinating Committees chaired at the federal level by the Director of Public Investments (in Presidencia) and at the state level by the Governor. These committees met about every two to three months and were attended by the representatives of the participating agencies. These meetings were generally too large and formal to achieve any real coordination effort; their importance was due to their drawing together for the first time the numerous agencies involved in executing the program to provide a forum for mutual communication of their objectives and activities. This arrangement allowed unprecedented coordination of investment planning at the micro-region level. At the sub-project level, however, plans were still designed independently by the respective executing agencies. For project execution, PIDER (Presidencia) state staff attempted to coordinate the various activities on an ad hoc basis. This did not prove adequate in view of the strong coordination needs required by many components of the program.

5.05 In 1977, when SPP was created and responsibility for PIDER was placed with that secretariat, two arrangements were made to strengthen program coordination. First, based on the favorable reception of the PIDER state coordinating committees, State Committees for the Promotion of State Development (COPRODES) were set up to plan investments at the state level for all funding programs. The COPRODES were chaired by the Governor, and since they coordinated the planning for all governmental programs within the state, they allowed for greater complementarity of public investments than had the earlier system. Early in 1978, SPP set up state-level sub-committees to focus on individual sectors or groups of related activities. The sub-groups met to discuss both PIDER and non-PIDER activities, in order to provide practical guidelines for the timing, integration, and spatial location of the various activities. However, there was little change in mechanisms to coordinate agency actions during execution of individual sub-projects.

5.06 The mid-term evaluation of PIDER I, carried out by the Bank, SPP and CIDER, identified as the most crucial factor impeding program coordination the lack of legitimacy of PIDER (that is, SPP) as a coordinating body: other ministries and agencies did not recognize the authority of SPP to influence the timing or quality of the performance of their activities. The Mid-Term Evaluation Report suggested the need for a Presidential Decree renewing the administration's commitment to the program and legitimizing SPP's coordinating role with respect to PIDER-funded activities.^{1/} The problem remained unresolved until 1981, when the program's administrative strategy was redesigned (para 6.03).

Agency Strengthening

5.07 The Mid-Term Evaluation stated that "PIDER's eventual success in program coordination and in achieving its objectives rests on PIDER's ability to strengthen the executing agencies in carrying out PIDER's poverty-oriented tasks. This dimension was not sufficiently recognized at

^{1/} Ibid, p.27.

the outset of the program."^{1/} This issue arose from recognition of the fact that many of the difficulties arising both in sub-project execution and in making investments function stemmed from lack of poverty-group focus in many agencies' normal programs. The persistence of agencies' usual orientation resulted in insufficient appreciation of the importance of suiting design of sub-projects to the general level of sophistication of beneficiaries, of developing technologies adapted to both ecological conditions and economic scale of producers, and of communicating effectively the obligations for maintenance, repayment, and so forth, which were required of beneficiaries. Some agencies were unwilling to adapt their investment criteria to PIDER beneficiaries. In states where a given agency's budget was relatively large, the agency could refuse to execute PIDER-funded investments; even in cases where PIDER funds represented a substantial increase in total budget, SPP's efforts to strengthen the agency's target-group focus achieved limited success. The Mid-Term report stated later that such strengthening would depend largely on the establishment of PIDER's (i.e. SPP's) legitimacy in coordination, which in turn would rest mainly on the extent of budgetary control (determined by the proportion of PIDER funds to total agency budget). The question arises as to whether it was realistic to cast the agency responsible for the PIDER program into the role (not anticipated at appraisal) of enforcer of agency reform, given the simultaneous struggle to establish the legitimacy of the program's administration as agency coordinator. In any event, the issue of strengthening of agency target-group focus and programs has since been addressed from outside the PIDER program.

Monitoring and Evaluation

5.08 The plans for monitoring and evaluation of PIDER I, set out in broad terms at appraisal, outlined a dual system: the monitoring of physical and financial progress under the project would be done by an internal management information system, while evaluation of project impact would be carried out by a semi-autonomous Rural Development Research Center (CIDER). The management information system evolved during the project period into a relatively efficient working system which allowed expenditure control and accurate tallying of construction results. However, best use of the system to overcome delays or other problems in construction required corresponding systems within executing agencies, and the ability of management of those agencies to respond to the information and correct the problems. In many agencies, either the information system or the management response was lacking during the project period.

5.09 After the construction phase was complete, however, there was a significant loss in information flow on the status of sub-projects. This reflected, in part, the lack of formal linkage between CIDER and the PIDER monitoring system. At the same time, the original concept of the program as primarily concerned with investment (rather than with the post-construction, operational phase) persisted among program staff, though PIDER management had accepted the integrated concept for PIDER I. Thus, there was a loss of continuity, due both to the different groups involved in data gathering and to the focus of those groups.

5.10 It was envisioned at appraisal that "ongoing evaluation" would be

1/ Ibid

undertaken by CIDER. As described in the SAR, this function was conceived of as both a management information system regarding project effectiveness and a system to provide data for and to carry out ex post impact evaluation. In fact, CIDER developed neither of those capabilities. Though it produced several useful and interesting studies regarding various aspects of project impact, its failure to develop a systematic methodology to monitor specific impact indicators on an ongoing basis resulted in an inability to evaluate that impact quantitatively. While CIDER's shortcomings are clear in retrospect, it should be noted that at the time of appraisal, neither methodologies nor specific guidelines had been articulated either in the Bank or in Mexico for carrying out the functions described in the SAR.

5.11 CIDER played a major role in developing the set of guidelines and procedures for reprogramming micro-regional investment plans, currently used by SPP for medium-term planning. The guidelines provide step-by-step instructions for state planners in analyzing micro-regional resources, needs, and development priorities; integrating beneficiaries in the planning process; and selecting sub-projects according to established criteria. This assistance has made a valuable contribution to the development of internal planning capacity in SPP which can carry over to other programs as well. In enumerating CIDER's failures as a true "Monitoring and Evaluation" unit, these positive contributions ought not to be overlooked.

VI. REPEATER PROJECTS AND INSTITUTIONAL DEVELOPMENT SINCE 1979

6.01 By the end of 1981, the PIDER program had expanded to include 134 micro-regions. Both this expansion and general bureaucratic reform led to a number of changes in program administration, some of which address the issues discussed in Chapter V. Both the intent and the effect of these changes were to decentralize authority for planning and implementation of PIDER and a number of other programs to the state level. Some of these changes affect PIDER II, effective since October 1977 and due for completion in June 1982. The more recent and significant changes promise to enhance the impact of PIDER III, signed November 6, 1981, and due to become effective in May 1982.

6.02 In 1979/80 PIDER management took advantage of preparation of the third Bank-assisted PIDER Project to rework the methodology for micro-regional planning, with renewed emphasis on beneficiary participation in the planning process and on a greater participatory role for state-level executing agency representatives. While beneficiary participation was always an objective of the program, the new planning methodology was designed to provide practical guidelines for ensuring such participation. The new methodology was tested with a sample of micro-regions, revised, and the revised methodology then used to reprogram all of the micro-regions which would be part of PIDER III. Subsequently, it was to be applied to all PIDER micro-regions.

6.03 In 1981, a major reorganization of the management of all federally funded programs was effected. The result of this recent reorganization as it affects PIDER is as follows: first, planning for all public investment is done at the state level by a state planning and coordinating committee (COPLADE), with better-defined responsibility than the COPRODES, which it replaces. The objective of this is to avoid duplication of effort in planning and to achieve better distribution of

resources. Second, principal authority for coordination of implementation of PIDER-funded activities has been placed in the hands of the state governors. Since governors have considerable power in the states, this is designed to expedite elimination of bureaucratic bottlenecks, and increase effective coordination of agencies during implementation of both the construction and operation phases of the program. A number of instances have been cited which demonstrate that the exercise of the governor's authority has indeed improved coordination among implementing agencies, and in some cases has forced action from agencies which had been lagging in carrying out PIDER-financed activities. SPP state representatives play a role of policy and technical advisers to the governors in this arrangement, and they carry major responsibility for monitoring and evaluation of program progress and impact. Authority for overall program policy, strategy, and planning remains with SPP in Mexico City.

SPP Staff Training and Experience

6.04 Within SPP, management of PIDER is headed by well-trained individuals, all of whom have worked with the program since its inception. They show strong commitment to poverty-group-focused public investment in general, and to the PIDER program in particular.

6.05 One problem that has appeared in SPP at state and federal levels as a result of the reorganization of responsibilities, is that some uncertainties regarding effective allocation of staff and definition of roles have arisen in the transition period and still persist. (SPP is aware of these problems and is taking steps to resolve them.) On the other hand, a considerable number of trained staff have gained valuable experience at micro-regional, state, and federal levels, providing an unusually rich pool of manpower which can be channelled into redefined functions.

6.06 In order to provide an improved level of training to all of its PIDER-related staff--including those based in the state and micro-regional offices--and to strengthen communication of strategies, objectives, and procedures to staff, SPP has begun a program of staff training through seminars. The seminars will serve for exchange of problem-solving ideas as well as for formal training. This training program is being supported under the PIDER III loan.

Monitoring and Evaluation

6.07 An important way in which PIDER management is planning to use its available human resources is in the development of a new, comprehensive monitoring and evaluation system. Design of the system and specialized staff training is well underway. Until now, monitoring has focused mainly on physical progress of construction (para 5.08). The new system is designed to support management decision making in a longer-term perspective, including not only the construction phase, but the operational phase as well.

Current Transitions

6.08 At the state and micro-regional levels, SPP staff involved in administration of PIDER are currently engaged in facilitating the shift of

responsibility to the Governor's staff. Representatives of the SPP state delegations have themselves identified the need for more effective monitoring and evaluation of PIDER activities and their own need for additional preparation to carry out these functions. If this retraining could be accomplished, it would enhance the other emerging role of state SPP staff i.e., as technical advisers to the state planning office and to the development planning committee.

VII. BANK PERFORMANCE

7.01 As noted in Chapter II, the original program concept as developed by the Mexican Government was characterized by: (a) a public grant approach; (b) a focus on physical infrastructure investment; and (c) a plan to reach all ejidos in project areas. Bank input resulted in modification of program design to include increased software (credit, greater attention to extension and applied research, farmer organization) to complement infrastructure; increased attention to cost recovery and beneficiary contribution to investment; and a sharper target-group focus. With respect to the last item, the appraisal mission pressed the Mexican planners to focus on the distribution of program benefits by setting a per-family investment ceiling, hoping thereby to reach poorer ejidos and more families within the ejidos; and by including groups of small landowners, as well as communities legally organized as ejidos. The Bank expressed the concern that benefits reach the majority of population within communities—an ideal which proved impracticable for physical-investment-oriented productive projects, though more achievable for software and social infrastructure components. The examination of problems stemming from inequitable distribution of benefits within ejidos has led to the concept of ejido (or community) planning—a broader perspective than sub-project investment planning—though, realistically, the concept will probably not be applied uniformly for some years.

7.02 The original Mexican plan for the program was ambitious, both in content and pace of project implementation. There was some concern expressed in the Bank during preparation and appraisal about the operability of a program of such size and complexity, though the project as finally defined and accepted included nearly all of the components of the Mexican program, plus some additions (e.g. credit). In retrospect, the comprehensive nature of the program and its wide geographic distribution were important in enabling the program not only to survive the transition of presidential administrations, but to expand subsequently. By 1976, the program was benefitting a substantial proportion of the rural population, and as a result, could not easily be dismantled.

7.03 The stated objectives were rather ambitious, given a three-year project period. First, the fact that institutional coordinating mechanisms were initiated for the program and that staff were inexperienced made it probable that some policies or actions taken would be on an experimental basis and might need to be reversed. The advantage of the newness or inexperience of both institutions and staff was exactly this ability to develop rather than prescribe solutions to problems, and though implementation went forward relatively quickly, the process of ironing out the bugs implied redoing some activities and abandoning others. Second, and related to the first factor, most executing agencies were not primarily small-producer oriented (para 5.07). Successful execution of PIDER

sub-projects required a change in focus--not only in attitude, but in everything from technologies to delivery mechanisms. Third, the number of sub-projects planned required considerable mobilization of resources, and in most cases, the only way to avoid undue stress (and competition even among sub-projects for similar inputs) was to pace construction over several years. Thus, a number of sub-projects were only begun in the last year of the project period; many of these are not yet operating. In a few micro-regions where existing roads were poor and the terrain difficult, productive investments had to be postponed, and very few were begun during the project period. Finally, maximum success of the productive sub-projects depended on both institutional and technical strengthening of the extension program. Even if efforts to develop locally adapted technical packages had begun at the start of the project period, the results for neither annual nor tree crops would have been available at the end of three years.

7.04 Many of the same factors led to larger Mexican manpower requirements than initially estimated. In this case, limited experience with this type of large, multi-component, integrated project led to underestimating the degree to which each characteristic of the program affected manpower requirements. That is, the number of beneficiaries, the need for assisting them to organize producers' groups, baseline levels of technology, cultural differences among beneficiary groups, the large number of sub-projects, and the difficulty of physical conditions interacted to place considerable strain on available manpower. A number of observers in the Bank expressed concern over the sufficiency of manpower at appraisal, and the software components were supposed to treat this difficulty. The Bank's understanding was that additional extension agents funded by PIDER, for example, would devote all of their time to PIDER beneficiaries (or beneficiary communities). In fact, it often proved difficult to effect increases in line agencies' staffs, and where new agents were hired, they were given many non-PIDER responsibilities.

7.05 It appears that the Bank's overall assessment of implementation capacity was largely correct. Though some concern was expressed regarding the somewhat vaguely defined institutional mechanisms, the quality of PWG staff at all levels was remarked by Bank missions as impressive. In retrospect, the strength of the institutional arrangements has been shown by their flexibility in responding to unanticipated problems and changing conditions and their durability through several reorganizations due to external events. On the other hand, the Bank's view of the appropriate role of the Permanent Working Group (PWG), and later, of SPP, contrasted with both the original Mexican concept of the central program management's role, and with what has proved workable in practice. Specifically, early supervision reports commented that the missions had encouraged the PWG to take a more active role in coordinating implementation and in developing plans. As the program grew, the group did attempt to play a more active management role. However, neither Presidencia (and therefore the PWG) nor SPP had real authority over the executing agencies (paras 5.6 - 5.7). The persuasive power of SPP in constraining agencies to cooperate with PIDER-specific guidelines varied according to the size of the PIDER budget for a given agency in a given state relative to the overall budget, as well as to the capability of state-level PIDER and line agency staff. In cases where the PIDER budget represented a small proportion of the whole, agency directors often chose not to bother with the special requirements which execution of PIDER

investments involved. For this reason, the designation of state governors as authority for PIDER implementation has produced more effective results.

Operating Forecasts

7.06 The nature and reasons for physical target shortfalls are discussed in paras 4.05-4.11. In retrospect, it appears that appraisal forecasts with respect to production and temporary employment generated were optimistic both overall and on a sub-project basis. First, construction of productive infrastructure in many cases was not as quickly accomplished as anticipated, resulting in later start-up of operation and in fewer production units overall than had been expected. On the other hand, estimates of permanent employment generated exceed appraisal expectations. Second, the Bank's concern with the adequacy of the extension system and credit availability (paras 2.10-2.11) proved valid, with the result that uptake rates and production levels were lower than expected on many sub-projects. It should be noted, however, that PIDER management in SPP as well as staff in other Government agencies have recognized and are addressing issues related to improvement of the productivity of small producers. The PIDER program is ongoing in all of the original (i.e. PIDER I) micro-regions, and assistance is being continued to enable beneficiaries to reach full development with their investments. SPP is placing increased importance on software components, and is developing an improved monitoring and evaluation system (paras 6.7). Its overall perspective has grown longer-term in the process, to include the operating phase of investments in a continuum with the construction phase. The Bank is supporting these efforts to focus more sharply on software. Under the PIDER III loan, 21% of baseline costs were for software components (not including credit) with 8% for extension, 1% for monitoring and evaluation, and 3% for additions to program management, including financing for training staff. Under PIDER I, 10% of base costs were for software, with 7% for extension. No allowance was made for management requirements. Much of this shift in emphasis has resulted from mutual Bank/SPP assessment of problems and solutions.

Bank Supervision and Working Relationship

7.07 From preparation, appraisal, and through most of the supervision of PIDER I, continuity of staff in Bank missions permitted development of a good working relationship with Mexican management. The fact that a number of Bank recommendations not only have been complied with for the Bank-assisted portion of the program, but have been incorporated into the program as a whole demonstrates the quality of this relationship. It has been acknowledged that Bank support was important in assisting the program through several organizational transitions. Because of the overriding importance of these transitions and the necessity for continuing development of the institutions responsible for PIDER, organizational issues absorbed considerable attention of supervision missions during much of the PIDER I project period.

7.08 One issue which had been considered vitally important at appraisal and which was gradually given less attention was the question of the implementation of an improved extension and applied research program. Presentation of an operational plan for an improved program was a condition

of effectiveness (para 2.13). The plan as finally presented was a statement of intention, but was not considered operational by the Bank. The director of the program agreed, but said that an operational plan would be developed within three months. The plan was therefore accepted with reservations. Supervision missions over the next two years reported disappointing progress in improving the extension program, and little evidence of progress in applied research. Field visits showed that in many cases, infrastructure was operating adequately as a result of assistance provided through the existing or expanded extension program, but the qualitative changes necessary to make such investments uniformly operative in all areas had not occurred.

7.09 The question arises of whether the disappointing results regarding extension were due to borrower failure to comply with the negotiated agreement, or whether the condition itself was reasonable in the institutional context of the program in Mexico at that time (1975). The plan for an improved program was to be drawn up by a group comprising staff from Presidencia (PIDER), the Extension Service of the Secretariat of Agriculture (SAG), the Agricultural Research Institute (INIA), and the Postgraduate School for Agriculture. This committee agreed on an extension methodology, which was to be implemented by existing agencies (the agency responsible for extension in a given community depended on both the cultural and linguistic characteristics of the beneficiary community and on the types of crop). All of the agencies involved were under the ultimate authority of SAG, but internal coordination in that Ministry was weak, making coordination of multi-agency extension efforts for PIDER an issue of crucial importance. The agreement with the Bank had been made by Presidencia, yet compliance depended on SAG.

7.10 Despite the shortcomings of the programs of extension and adaptive research when viewed in the specific context of the PIDER I "project" period, the real contribution of the Bank's insistence on the inclusion of extension as a "project" component and on the strengthening and refocusing of the extension program deserves to be recognized in a larger perspective. It was mainly due to the Bank's insistence on the importance of these elements that the approach of the PIDER program as a whole gradually changed from "infrastructure only" to a longer-term "integrated" one. Presidencia's, and subsequently, SPP's, focus on extension slowly forced increased attention on the target-group focus of the extension and adaptive research programs. SARH's Rainfed District Program, among others, has since helped to strengthen that focus.

7.11 Due to the complexity of the program, it was not possible to consistently include staff on supervision missions with the optimal mix of skills. Missions attempted to review the status of every component on nearly every mission, in addition to assessing the development of stability

and effectiveness of the institutional arrangements. This approach may have been necessary during the PIDER I project period, when the program was getting off the ground and evolving. As an increasing number of sub-projects complete the construction phase and are ready for operation, however, greater attention must be given to the technical and organizational difficulties necessary to make them operate. This can only be done by a careful, detailed examination of each type of sub-project to analyze the critical elements for success and to propose alternative solutions to problems and bottlenecks. Recent missions for PIDER II supervision have concluded that most effective use of mission time would be gained from careful identification of issues to be treated on each mission and selection of expertise required (and therefore of mission members) accordingly.

7.12 Regarding the identification and selection of issues for treatment on missions, the reporting system would play a crucial role, along with direct field observation by missions. The reporting requirements as originally defined were of limited usefulness for this purpose, since it was not possible to interpret from the reports anything beyond budgeted and actual expenditures by component. It was impossible to determine the physical status of works from the data, and the state of operation of works was not monitored. According to SPP's PIDER management, neither are these reports useful for internal program monitoring. The Government is currently working out an internal reporting system, which should be examined for possible use for reporting to the Bank. If such reports are to be used as a tool in assuring the success of the program's development efforts in the longer perspective, information regarding the functioning of infrastructure, as well as the status of construction, is essential. Such information should be obtainable through the new monitoring system now being set up (para 6.07).

VIII. CONCLUSIONS

8.01 Examining the experience of PIDER I, as a project, and as representative of the PIDER program as a whole, a number of positive achievements are apparent, as well as some persistent problems. Measured against appraisal expectations, the institutions responsible for the program have evolved to a different arrangement than originally set up—to one clearly stronger than that which it replaced. Program management has grown from a small central group to a decentralized network within SPP, and finally to a partnership between that network and the state Governments. Government commitment has remained strong, as attested by the continuation of the program through two presidential administrations, and by the growing program budget. The original objectives of the program have been retained and in fact expanded; management now sees a wider role for program coordination. The concept of the program has grown beyond the original heavy emphasis on infrastructure to one of a truly integrated approach with increased emphasis on software components and on monitoring and evaluation.

8.02 On the other hand, coordination among components during the project period was less smooth than projected. For this reason, with hindsight, production projections made at appraisal appear optimistic. Those projections were based on -- "s of expansion of irrigated hectareage, timely factor revision of credit and

extension, and adoption rates which depended in turn on smooth coordination of a number of agencies. Results of studies suggest that, even if all the factors function smoothly together, a development period longer than the eight years allowed at appraisal should be envisioned. Many of the productive sub-projects required lead periods after construction of infrastructure, either for beneficiary training or for maturation of perennial crops.

8.03 Measurement of overall project impact was limited by the capacity of CIDER, of which much was expected at appraisal. Perhaps one difficulty faced by that institution was that it was intended to evaluate the entire program, but the program grew at a much faster pace than did CIDER. The Mid-Term Evaluation points out, however, that even on a small sample basis, CIDER was not doing the kind of consistent, repeated studies of individual communities which would generate the sort of comparable data necessary to allow impact evaluation. 1/ Both the experience gained through these difficulties, and the valuable topical studies produced by CIDER are being utilized in the design of the new program-wide monitoring and evaluation system.

8.04 In order to maximize benefits from investments made under PIDER I, attention needs to be given to making productive investments operate at close to optimal level. This in turn requires increased emphasis on adaptive research to develop technical packages suited to specific conditions--both ecological and economic--of farmers' environments. Continued support should also be given to beneficiaries through extension and technical assistance.

1/ MTE, p.30-33.

MEXICO
INTEGRATED RURAL DEVELOPMENT PROJECT - PIDER I
Estimated Disbursement Schedule

Annex I
Table 1

Accumulated Disbursements
(USS\$ '000 equivalent)

<u>Bank Fiscal Year and Quarter, ending:</u>	<u>Appraisal Estimate (March 1975)</u>	<u>Actual Disbursement (June 30, 1978)</u>
1975		
March 31, 1975		
June 30, 1975	7,500	
1976		
September 30, 1975	16,900	
December 31, 1975	27,200	
March 31, 1976	38,000	
June 30, 1976	49,200	21.2
1977		
September 30, 1976	60,800	22.2
December 31, 1976	72,800	25.0
March 31, 1977	83,000	30.2
June 30, 1977	89,900	33.6
1978		
September 30, 1977	96,200	41.2
December 31, 1977	102,000	48.0
March 31, 1978	106,500	48.0
June 30, 1978	110,000	49.5
1979		
September 30, 1978	110,000	59.3
December 31, 1978	110,000	60.9
March 31, 1979	110,000	71.3
June 20, 1979	110,000	72.5
1980		
September 30, 1979	110,000	92.4
December 31, 1979	110,000	92.4
March 31, 1980	110,000	96.0
June 30, 1980	110,000	103.5
1981		
September, 30, 1980	110,000	110.0

MEXICO

Integrated Rural Development Program--PIDER I (L#1110-ME)
Appraisal vs. Actual Disbursements by Category
(US\$000)

Category	Appraisal Allotment (a)	Actual Disburse- ments (b)	Difference (b-a)
TOTAL	110 000.0	110 000.0	-
Irrigation	18 770.0	17 528.0	- 1 172.0
Soil & Water Cons.	5 200.0	7 770.0	+ 2 500.0
Livestock Development Infra. & Beekeeping	11 800.0	10.957.0	- 843.0
Medium & Long-term Credit	23 900.0	23 900.0	-
Fruit Crop Development Forestry, & Fisheries	4 200.0	4.200.0	-
Feeder Roads	6 600.0	12 100.0	+ 5 500.0
Rural Electrification	6 400.0	6 400.0	-
Farmer Organization	3 200.0	4 500.0	+ 1 300.0
Extension & Demonstra- tion Plots	7 900.0	8 300.0	+ 400.0
Marketing	700.0	700.0	-
Classrooms	3 100.0	3 491.0	+ 391.0
Health Centers	1 800.0	1 582.0	- 218.0
Potable Water Supply	6 600.0	7 100.0	+ 500.0
Self-Help Programs	1 900.0	1 542.0	- 358.0
Unallocated	8 000.0	-	- 8 000.0

Table 4.3(a) Expenditures for PIDER I, Authorized and Actual by Executing Agency and by Sub-Projects, 1975-1979
For the Six Representative MICRO-REGIONS
(MEX\$'000)

Executing Agencies/Sub-Projects	MICRO-REGIONS																					
	Total		Cosala-Eloxochitlán		Noroeste		Sur-Nuevo León		Llano		Sur-Yucatán		Zacapoaxtla									
	Budgetary	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual								
Author- fixation	Expen- ditures	Auth.	Expen- ditures	Auth.	Expen- ditures	Auth.	Expen- ditures	Auth.	Expen- ditures	Auth.	Expen- ditures	Auth.	Expen- ditures									
Total Expenditures	1,168,850	937,050	80	228,898	198,264	97	178,082	125,020	70	243,382	185,683	76	175,232	119,640	68	228,347	186,101	81	146,379	117,300	80	
Secretariat of Agriculture and Water Resources - SARM	495,281	349,296	70	79,888	66,719	83	58,376	41,616	71	135,569	89,398	70	83,220	45,621	55	91,007	71,758	79	39,692	28,199	71	
Irrigation	192,289	132,359	69	18,778	17,163	91	32,476	24,122	74	65,190	38,091	58	41,691	26,390	63	33,130	25,768	78	1,033	845	82	
Soil and Water Conservation	38,137	35,778	94	5,595	4,551	81	4,568	4,568	X00	11,770	11,100	94	9,304	9,304	X00	-	-	-	6,900	6,255	98	
Fruit Development	8,867	2,905	33	-	-	1,017	877	86	7,850	2,028	26	-	-	-	-	-	-	-	-	-	-	
Livestock Development	94,970	62,206	65	24,619	15,562	64	7,150	4,895	69	31,242	22,463	72	17,066	7,171	42	14,893	12,115	81	-	-	-	
Reforestation (establishment of nurseries)	1,895	1,413	78	-	-	-	-	-	-	-	-	-	-	-	-	1,895	1,413	78	-	-	-	
Extension and Technical Assistance	102,336	65,516	64	23,675	22,896	98	13,165	7,156	54	3,113	246	8	15,159	2,756	18	15,456	11,363	73	31,759	21,099	66	
Water Storage (domestic & animal consumption)	24,365	21,366	88	6,116	5,462	89	5,463	5,463	X00	11,636	9,313	80	1,130	1,130	X00	25,624	21,099	82	-	-	-	
Water Supply	32,433	27,751	85	1,105	1,105	X00	-	-	-	5,704	5,547	97	-	-	-	-	-	-	-	-	-	
National Fruit Development	47,272	31,462	74	5,773	3,129	54	3,375	2,741	77	5,580	5,367	96	10,515	6,848	65	11,530	9,389	81	5,290	4,968	94	
Commission - CONAFRUIT	25,869	20,709	69	3,791	3,489	39	2,775	2,017	74	-	-	-	10,515	6,848	65	10,606	8,495	80	2,182	1,860	80	
Establishment of Nurseries and Orchards	12,403	11,733	95	1,982	1,640	83	801	724	90	5,580	5,367	96	-	-	-	932	894	96	3,108	3,108	X00	
Extension and Technical Assistance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
National Commission for Arid Zones - CONAZA	32,563	23,846	73	-	-	-	4,090	2,673	83	9,090	5,452	60	19,383	15,721	81	-	-	-	-	-	-	
Soil and Water Conservation	17,911	15,580	67	-	-	-	2,373	2,373	X00	4,695	2,397	51	10,843	10,810	98	-	-	-	-	-	-	
Livestock Development	6,112	3,355	55	-	-	-	1,717	300	17	4,395	3,055	69	-	-	-	-	-	-	-	-	-	
Water Storage	8,540	4,911	57	-	-	-	-	-	-	-	-	-	8,540	4,911	57	-	-	-	-	-	-	
Mexican Coffee Institute - INMECAFE	2,853	1,900	66	-	-	-	-	-	-	-	-	-	-	-	-	-	2,853	1,900	66	2,853	1,900	66
Coffee Rehabilitation	2,853	1,900	66	-	-	-	-	-	-	-	-	-	-	-	-	-	2,853	1,900	66	2,853	1,900	66
National Rural Credit Bank - BANRURAL	90,960	62,862	69	47,423	43,179	91	25,199	4,289	17	-	-	-	-	-	-	17,848	14,933	84	490	461	94	
Irrigation	64,005	40,785	64	40,304	36,800	91	23,701	3,985	17	-	-	-	-	-	-	-	-	-	-	-	-	
Fruit Crop Development	1,498	304	20	-	-	-	1,498	304	20	-	-	-	-	-	-	-	-	-	-	-	-	
Livestock Development	23,457	21,773	85	7,219	6,379	89	-	-	-	-	-	-	-	-	-	17,848	14,933	84	490	461	94	
Other Banks	7,224	5,024	69	-	-	-	-	-	-	-	-	-	4,938	3,257	66	2,286	1,767	77	-	-	-	
Irrigation	2,686	1,767	77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Livestock Development	4,938	3,257	66	-	-	-	-	-	-	-	-	-	4,938	3,257	66	-	-	-	-	-	-	
Secretariat of Agrarian Reform-SRA	61,156	52,986	87	-	9,803	7,703	78	11,494	10,224	89	13,909	13,491	97	9,912	7,373	74	12,556	11,235	89	3,482	2,960	84
Farmers Organization	61,156	52,986	87	9,803	7,703	78	11,494	10,224	89	13,909	13,491	97	9,912	7,373	74	12,556	11,235	89	3,482	2,960	84	
Agricultural Graduate School	8,622	8,682	X00	-	-	-	-	-	-	-	-	-	-	-	-	-	8,622	8,682	X00	-	-	-
Agricultural Extension	8,622	8,682	X00	-	-	-	-	-	-	-	-	-	-	-	-	-	8,622	8,682	X00	-	-	-

1/ Authorized Actual Expense.

PROJECT COST AND FINANCING 1/
(in US\$ millions)

ANNEX III

Components	Appraisal Estimate			Actual			Actual Total as % of Appraisal
	Local	Foreign	Total	Local	Foreign	Total	Total
<u>Directly Productive Infrastructure</u>							
Livestock	16.8	4.2	21.0)	16.4	11.0	27.4	120
Beekeeping	1.6	0.2	1.8)				
Irrigation	26.4	8.8	35.2	26.3	17.5	43.8	124
Soil & Water Cons.	9.0	1.4	10.4	11.6	7.7	19.3	186
Fruit Crop Dev.	5.1	0.6	5.7)				
Forestry	1.6	0.2	1.8)				
Fishery	0.1	0.0	0.1)	6.3	4.2	10.5	138
Sub-total:	60.1	15.2	75.3	60.6	40.4	101.0	134
<u>Credit Development</u>							
Inc. Prod. Credit	36.4	9.1	45.5	18.8	23.9	42.7	94
	<u>15.8</u>	<u>2.2</u>	<u>18.0</u>	<u>—</u>	<u>—</u>	<u>3/</u>	<u>—</u>
Sub-total:	52.2	11.3	63.5	18.8	23.9	42.7	67
<u>Productive Support</u>							
Feeder Roads	12.0	0.9	12.9	18.2	12.1	30.3	235
Ext. & Field Demonst.	14.2	0.9	15.1	12.5	8.3	20.8	138
Farmer Org.	5.9	0.2	6.1	6.8	4.5	11.3	185
Marketing	1.3	0.1	1.4	1.1	0.7	1.8	129
Electrification	9.1	3.0	12.1	9.6	6.4	16.0	132
Sub-total:	42.5	5.1	47.6	48.2	32.0	80.2	169
<u>Social Infrastructure</u>							
Health	2.8	0.5	3.3	2.4	1.6	4.0	121
Education	5.0	0.8	5.8	5.2	3.5	8.7	150
Drinking Water	10.0	2.5	12.5	10.7	7.1	17.8	142
Self-help Projects	3.2	0.2	3.4	2.3	1.5	3.9	115
Sub-total:	21.0	4.0	25.0	20.6	13.7	34.4	138
Evaluation	0.6	0.1	0.7	—	—	2/	—
	<u>---</u>	<u>---</u>	<u>---</u>				
Base Cost	176.4	35.7	212.1	—	—	—	—
Physical Conting.	12.7	2.5	15.2	—	—	—	—
Expected Price Incr.	55.9	11.3	67.2	—	—	—	—
	<u>---</u>	<u>---</u>	<u>---</u>				
Total Project Cost:	245.0	49.5	294.5	147.9	110.0	257.9	88
	<u>----</u>	<u>----</u>	<u>----</u>	<u>-----</u>	<u>-----</u>	<u>-----</u>	<u>--</u>

1/ Appraisal estimates assumed exchange rate of US\$1.0 = MEX\$12.5. Approximately 20% of disbursements made at original rate; remaining disbursements made at an average of US\$1.0 = MEX\$21.3.

2/ "Actual Foreign" amounts are those financed by IBRD.

3/ Component not included in IBRD financing and not reported by SPP.

SOURCE: SAR, p. 19; SPP, Evaluacion del Credito 1110-ME.

PROJECT COMPLETION REPORT

Detailed Features of Project Components

Irrigation

Small-scale irrigation systems included water extraction/installations of a variety of types:

- (1) simple, small-scale diversion structures an streams with continuous flows;
- (2) small dams (maximum height 17 m) for retaining up to 200,000 m³ of water;
- (3) deep wells (25 m to 200 m) using pumps driven by windmills, or motors (diesel or electric);
- (4) pumping stations to extract water from continuous stream or lake.

Designs for dispersion of water included earthen canals, or concrete-lined canals (18" wide or larger) using pre-poured sections. Dispersion to individual fields nearly always by gravity flow. In a few areas (generally for grape production), drip systems were used.

Soil and Water Conservation

Activities financed under this component included increasing cultivable area by clearing land of trees, stumps, brush, and rocks, and by terracing slopes. Terrace borders were earthen ridges sometimes sown with agave or other drought-resistant plants. Also financed under this component were small water catchments some for crop irrigation, but most for cattle watering) and deep plowing (sub-soiling) for improvement of moisture retention of soils.

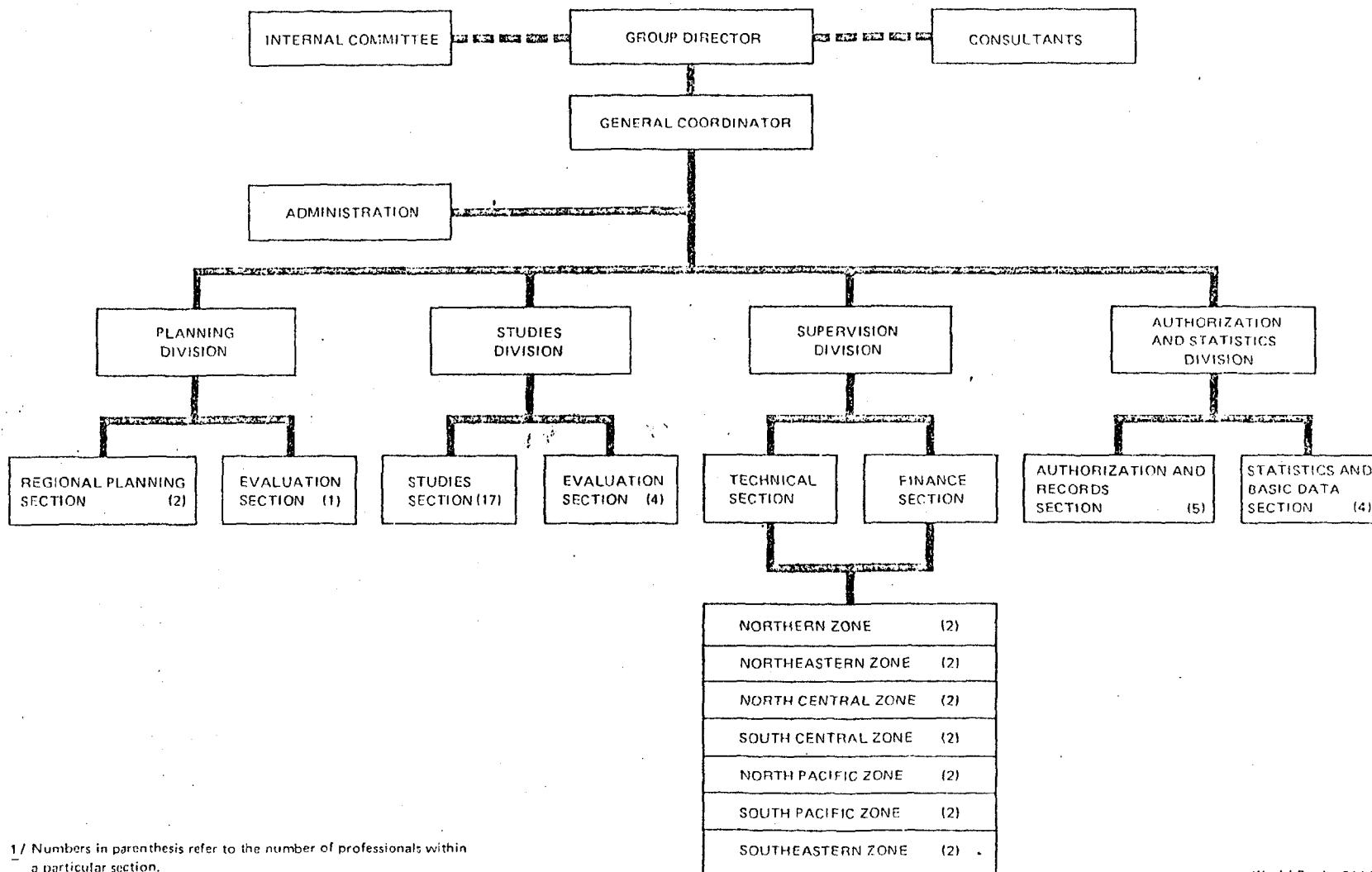
Livestock

The livestock component financed construction of infrastructure for handling animals on ejido lands. Infrastructure included corrals, feeding, watering, and handling areas for beef cattle, goats, and sheep. Dairy cattle units included milking facilities. Swine units were of standard size and design (concrete and steel construction) for installation in areas where at least some component of animal feed (e.g. sorghum) could be locally produced. In some areas poultry units (10,000 bird capacity) were built. The component also financed beekeeping units and honey-processing facilities.

Marketing

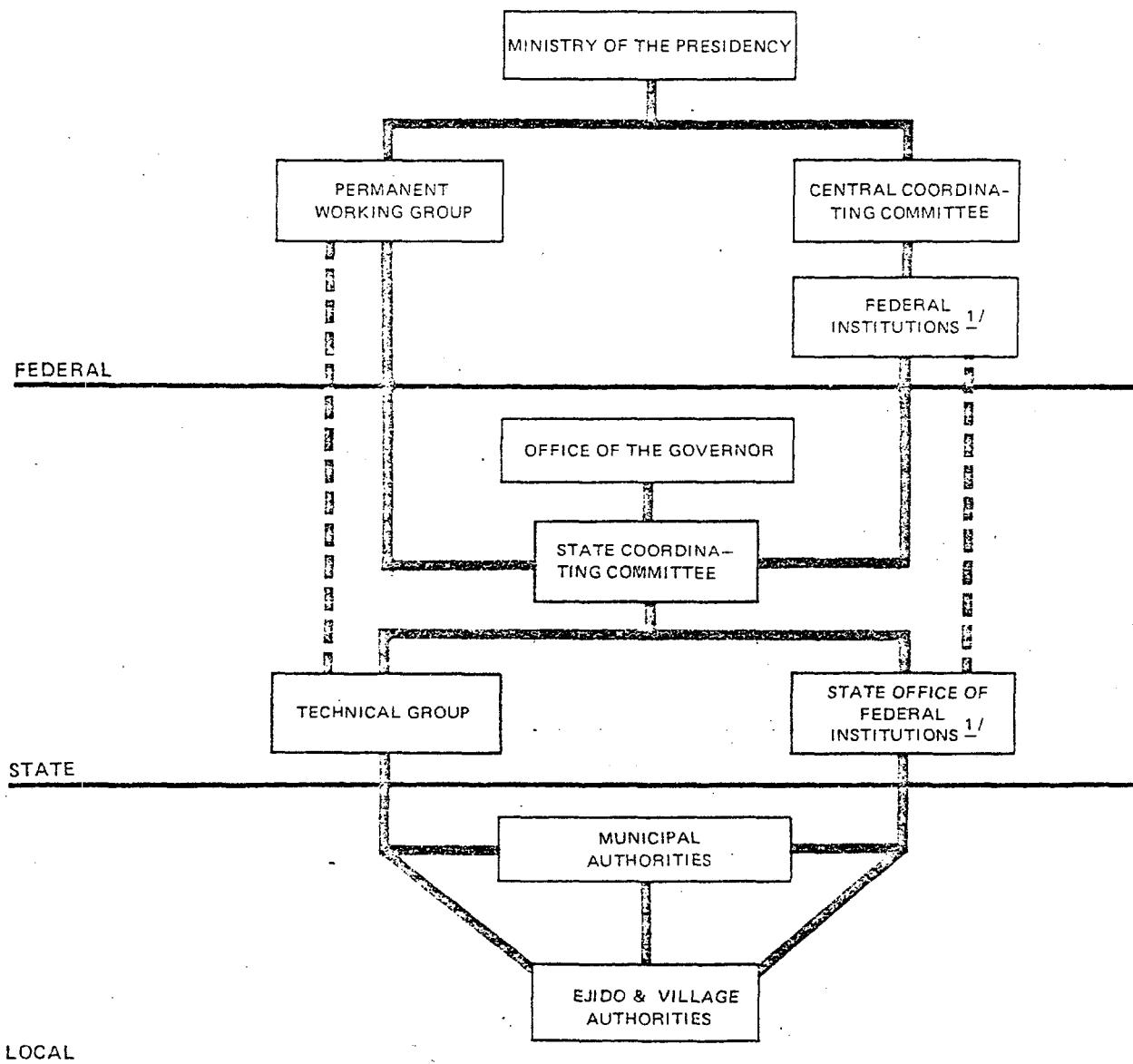
This component financed construction of grain storage facilities and rural stores. Rural stores were to sell basic consumer goods (primarily foodstuffs) at prices lower than prevailing among private intermediaries, and help market campesinos' non-agricultural products. Storage facilities were used as distribution stations for agricultural inputs, and provided limited producer credit, in addition to purchasing farmers' produce at officially guaranteed prices.

MEXICO
RURAL DEVELOPMENT PROJECT
Organization Chart for Permanent Working Group (PWG)



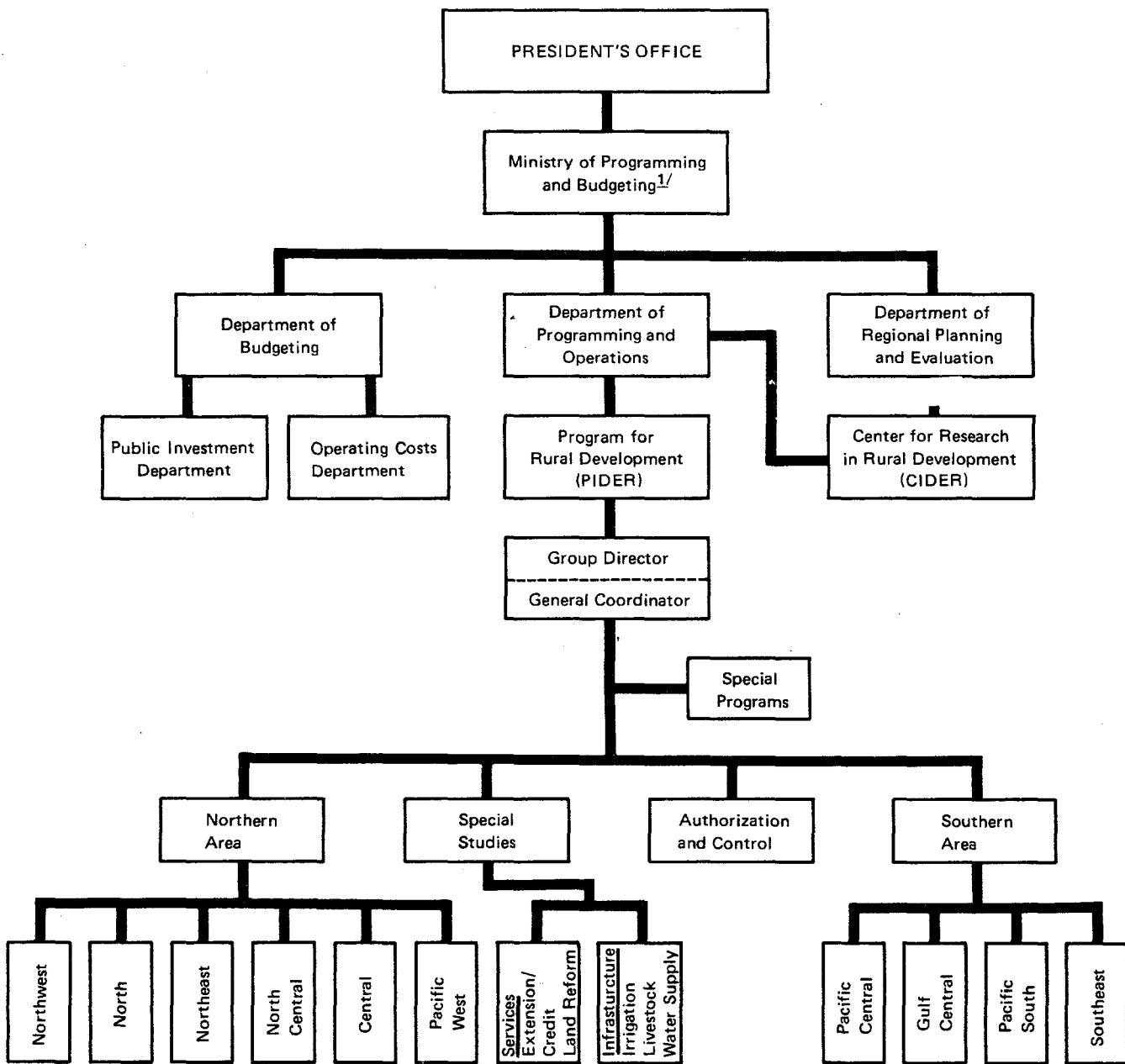
1/ Numbers in parenthesis refer to the number of professionals within a particular section.

MEXICO
RURAL DEVELOPMENT PROJECT
ORGANIZATIONAL CHART: FEDERAL, STATE, AND LOCAL LEVELS



1/ Federal Institutions represented at the Federal and State level include: Ministry of Agriculture, Ministry of Finance, Ministry of Public Works, Ministry of Water Resources, Ministry of Health and Assistance, Department of Agrarian Affairs and Colonization, Federal Electric Commission, National Corporation for Basic Marketing, Committee for Administration of the Federal School Construction Program, National Arid Zones Commission, National Indigenous Institute, National Institute for Rural Community Development and Low Cost Housing, the Ejido Bank, and The Guarantee Loan Fund.

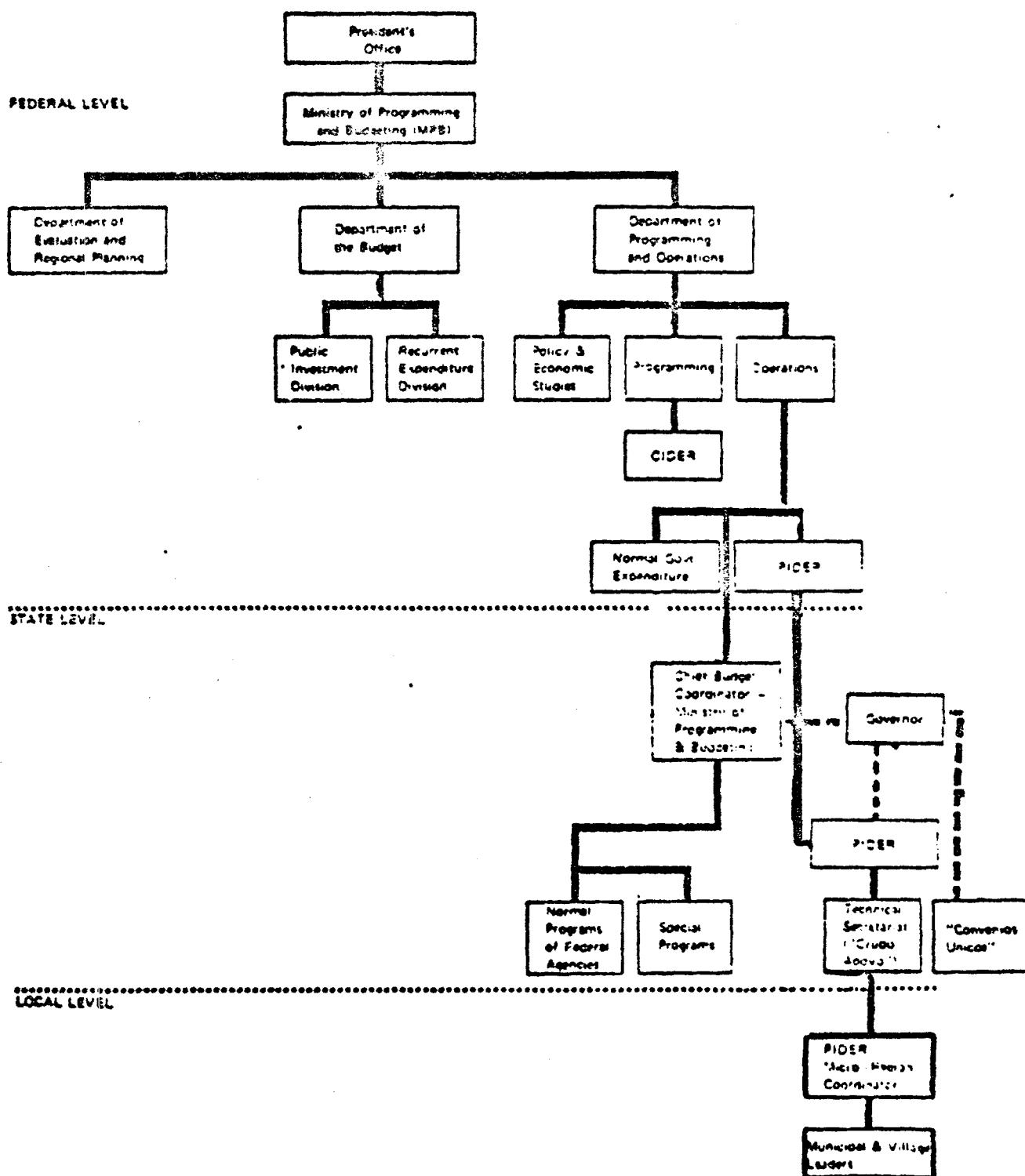
MEXICO
RURAL DEVELOPMENT PROJECT – PIDER II
PIDER ORGANIZATION CHART



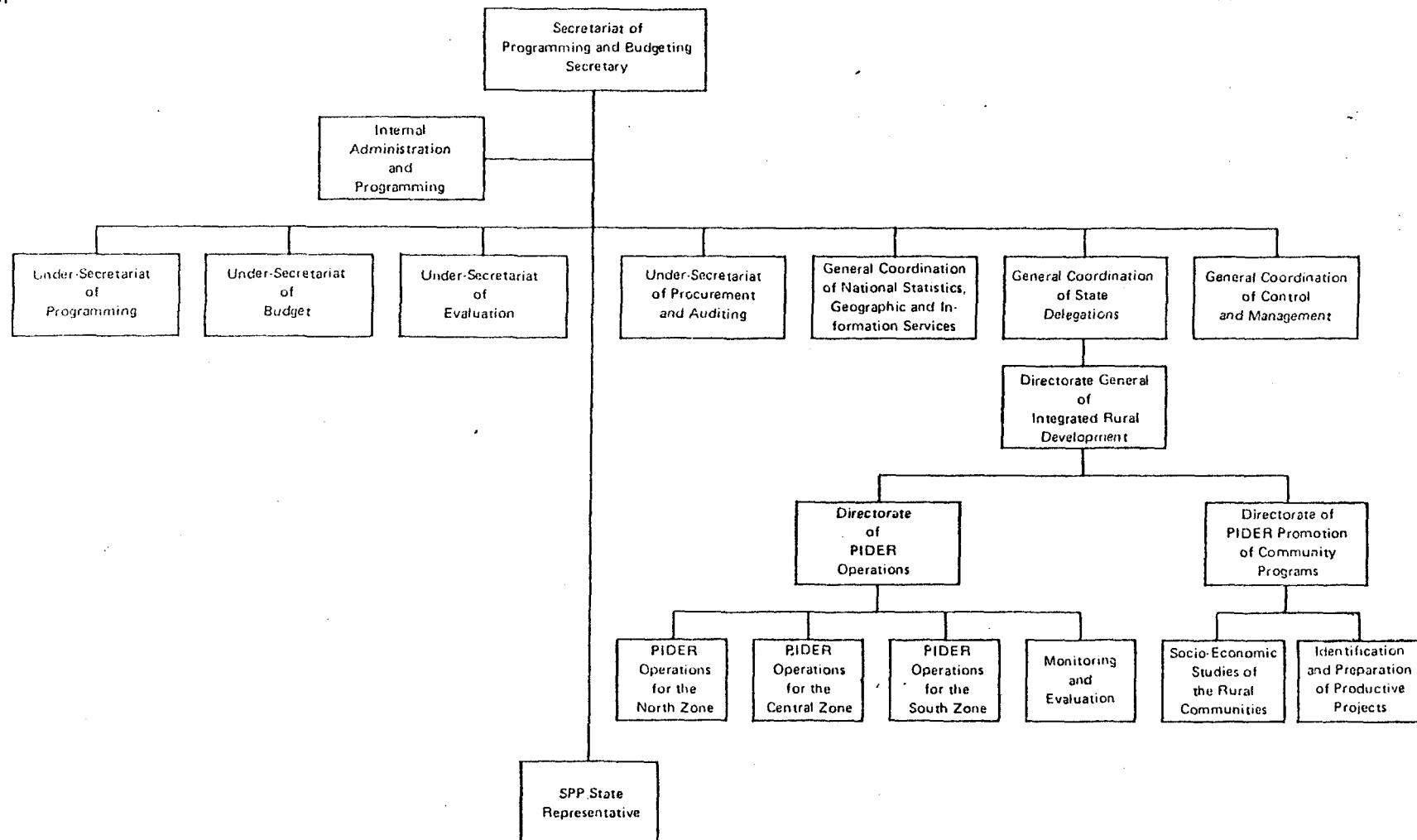
^{1/} Formerly Ministry of the Presidency

MEXICO
RURAL DEVELOPMENT PROJECT - PIDER II
Federal & State Organization (Feb. 1977)

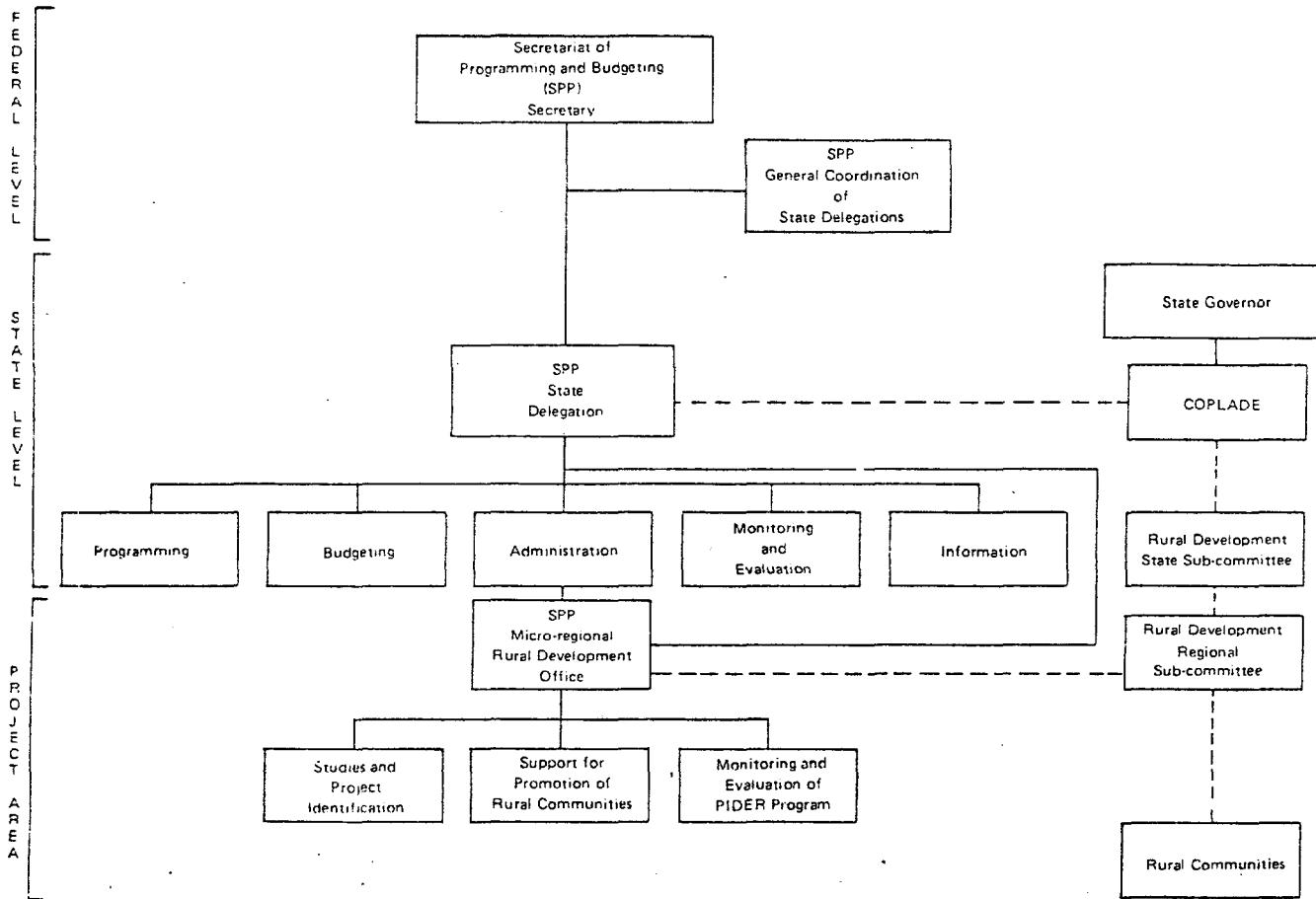
ANNEX V
Chart IV



MEXICO
INTEGRATED RURAL DEVELOPMENT PROJECT – PIDER III
Organization at Federal Level



MEXICO
INTEGRATED RURAL DEVELOPMENT PROJECT – PIDER III
Project Organization



COPLADE:

Chairman: State Governor
Technical Secretary: SPP State Representative
Members: Representatives of federal and state agencies; social and private institutions

Rural Development State Sub-committee:

Coordinator: Representative of State Government
Technical Secretary: SPP Representative
Members: Federal and state agencies; social and private sector, municipal authorities directly involved in the development of PIDER Program.

PIDER – Micro-regional Sub-committee:

Coordinator: Representative of State Government
Technical Secretary: SPP Micro-regional Representative
Members: Technicians of federal and state agencies; social and private sector; municipal authorities directly involved in development of PIDER Program in rural areas; and representatives of rural communities.

