Report No. 5078

The World Bank
Built-In Project Monitoring and Evaluation: Rural Development in Northeast Brazil

May 11, 1984

Operations Evaluation Department

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WEIGHTS AND MEASURES

metric system

CURRENCY EQUIVALENTS

Currency Unit:		Brazilian Cruzeiro (Cr$)
US$1.00	=	CR$7.2 (Rio Grande do Norte 12/74)
US$1.00	=	CR$14.56 (Ceara I 08/77)
US$1.00	=	CR$15.00 (Paraiba 09/77)
US$1.00	=	CR$17.27 (Bahia 05/78)
US$1.00	=	CR$22.58 (Sergipe 03/79)
US$1.00	=	CR$19.15 (Pernambuco 10/78)
US$1.00	=	CR$43.68 (Ceara II 02/80)
US$1.00	=	CR$56.00 (Piaui 09/80)
US$1.00	=	CR$100.68 (Maranhao 08/81)
US$1.00	=	CR$202.29 (Bahia II 09/82)
US$1.00	=	CR$529.5 (Export Development - 06/83)

FISCAL YEARS

Government of Brazil	-	January 1 to December 31
POLONORDESTE	-	April 1 to March 31

THE WORLD BANK
Washington, D.C. 20433
U.S.A.

Office of Director-General
Operations Evaluation

May 11, 1984

MEMORANDUM TO THE EXECUTIVE DIRECTORS AND THE PRESIDENT

SUBJECT: Built-in Project Monitoring and Evaluation: Rural Development in Northeast Brazil

Attached, for information, is a copy of a report entitled "Built-in Project Monitoring and Evaluation: Rural Development in Northeast Brazil" prepared by the Operations Evaluation Department.

Attachment

GLOSSARY OF ACRONYMS

AGRME	-	Monitoring and Evaluation Unit of the Bank's Agriculture and Rural Development Department
APAS	-	Agricultural Project Analysis System (a computerized program)
BTO	-	Back-to-Office Report
CEPA	-	Comissao Estadual de Planejamento Agricola (State Agricultural Planning Commission)
DRC	-	Development Research Center (World Bank)
IDB	-	Inter-American Development Bank
INCRA	-	Instituto Nacional de Colonizaçao e Reforma Agraria (National Institute of Colonization and Agrarian Reform)
M&E	-	Monitoring and Evaluation
OED	-	Operations Evaluation Department
OPS	-	Operational Policy Staff
PPAR	-	Project Performance Audit Report
PCR	-	Project Completion Report
PDRI	-	Projeto de Desenvolvimento Rural Integrado (Integrated Rural Development Project)
PIN	-	Programa de Integracao Nacional (National Integration Program)
POLONORDESTE	-	Development Program for Integrated Areas in the Northeast (of Brazil)
PROHIDRO	-	Programa de Aproveitamento de Recursos Hidricos (Water Resource Development Program)
PROTERRA	-	Programa de Redistribuicao de Terras e de Estimulo a Agro-industria (Land Redistribution and Agro-industrial Modernization Program)
SAR	-	Staff Appraisal Report

SERTANEJO	-	Programa Especial de Apoio ao Desenvolvimento da Regiao Semi-Arida do Nordeste (Special Program for the Development of Semi-arid Region of the Northeast)
SPV	-	Supervision Report
SUDENE	-	Superintendencia de Desenvolvimento do Nordeste (Superintendency for the Development of the Northeast)
TOR	-	Terms of Reference
USAID	-	United States Agency for International Development
UT	-	Unidade Tecnica (Technical Unit)

BUILT-IN PROJECT MONITORING AND EVALUATION:
RURAL DEVELOPMENT IN NORTHEAST BRAZIL

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BUILT-IN PROJECT MONITORING AND EVALUATION: RURAL DEVELOPMENT IN NORTHEAST BRAZIL

PREFACE

So far, the Operations Evaluation Department (OED) has issued three reports on built-in project monitoring and evaluation. The first review (OED Report No. 1758 dated October 14, 1977) dealt with monitoring and evaluation (M&E) experiences in ten small farmer rural development projects in Africa. The second review (OED Report No. 2724 dated November 2, 1979) dealt with six education projects, also in Africa. The third review (OED Report No. 3320 dated February 2, 1981) dealt with M&E experiences in eight irrigation projects in South and East Asia. A fourth and final overview of monitoring and evaluation has been planned by OED for some time. The fourth review was to be based mainly on experience with M&E under the Northeast Brazil rural development projects and the Nigerian agricultural development projects. However, the Nigerian M&E experience has been covered in extenso in the PPAR of the Nigeria Gusau, Funtau and Gombe Agricultural Development Projects (Loans 1099, 1092 and 1164), OED Report No. 3975 dated June 16, 1982, and also earlier in the first review. Furthermore, a major review of M&E in Nigeria is now underway by regional staff. Since the Nigerian experience has already been covered in various documents, it was decided not to proceed with yet another case study of this M&E experience. It was also decided to issue the review of experience with M&E in rural development projects in Northeast Brazil as a separate case study rather than attach it to an M&E overview. The fourth review will be completed shortly as a separate summary and overview document.

This report reviews M&E experiences gained during the execution of rural development projects in Northeast Brazil. It is based on a desk review of documents relating to project monitoring and evaluation as well as the findings of an OED mission to Brazil in July 1982, undertaken in conjunction with audits of the Brazil Alto Turi Land Settlement Project (Loan 853-BR; OED Report No. 4242 dated December 29, 1982) and the First Agro-Industries Credit Project (Loan 924-BR; OED Report No. 4232 dated December 22, 1982). Relevant documents, such as the Loan and Credit Agreements, appraisal and supervision reports, the Bank files on these projects, and other Bank documents relating to monitoring and evaluation, have been reviewed. Borrower and project officials and Bank staff involved in the design and implementation of the M&E components have been interviewed. The draft report was sent to the Borrower for comments on September 30, 1983. Comments received have been attached to this report.

This review calls attention to the different objectives of monitoring and evaluation: monitoring is essentially a management tool and therefore part of or equal to "management information system"; evaluation is a specific in-depth assessment of project impact. Even though evaluation is typically linked to monitoring in M&E components, it should be optional and separate from the management information system. This review also concludes

that management information systems should be designed during project preparation, and that the objectives of any proposed evaluation system need to be clearly spelled out from the beginning. Furthermore, the Bank needs to develop guidelines for selectivity in evaluation and to make a greater effort in training its staff to better understand M&E methods, techniques and objectives.

The assistance provided by project officers and other Bank staff knowledgeable about monitoring and evaluation, as well as Government and project officials who were visited in Brazil, is gratefully acknowledged.

BUILT-IN PROJECT MONITORING AND EVALUATION: RURAL DEVELOPMENT IN NORTHEAST BRAZIL

SUMMARY AND HIGHLIGHTS

Between 1975 and 1982, the Bank approved nine loans, (totaling US$283.7 million), for integrated rural development projects in Northeast Brazil. All of them were poverty-oriented and contained many components; monitoring and evaluation (M&E) was an important component in each of these projects. These Bank-funded projects were only a part of a much larger Brazilian Development Program for Integrated Areas in the Northeast (POLONORDESTE).

Northeast Brazil contains the largest concentration of poverty in Latin America. Its development has lagged substantially behind that of the rest of Brazil, and the region is extremely vulnerable to drought. Its agricultural sector is characterized by low labor productivity, and land tenure is highly skewed. Principal constraints to rural development are poor soils, periodic droughts, erratic rainfall and lack of access to land on a secure basis. There has been a long history of deep concern in Brazil about regional income disparities and the extent and degree of poverty in the Northeast. Initially, drought-proofing was seen as simply an engineering undertaking, but over time the socio-economic origins of poverty were recognized. With the creation of SUDENE (the Superintendency for the Development of the Northeast) in 1959, more emphasis was given to regional planning. Industrialization was the priority in the sixties, and only in the last decade has rural development received particular attention; a major stimulus was POLONORDESTE, a program under which integrated development of specific areas was promoted. The Bank has participated in funding this program, especially since the mid-seventies. Earlier it had funded a research project to gain better insights into the development constraints of the agricultural economy of Northeast Brazil.

The administrative structure of POLONORDESTE is complex. It involves many different agencies, and is characterized by multiple levels of responsibility, overlapping functions and complicated mechanisms for the allocation and transfer of funds. The projects are administered at four levels: federal, regional, state and local, and POLONORDESTE planning and managerial systems can best be described as top-down. Elaborate coordination is required, both vertically and horizontally between project technical units and implementing agencies, at the headquarters level and in the field. Because of POLONORDESTE's multi-dimensional complexity, many actors are involved, all requiring information. This has resulted in unwieldy monitoring systems producing substantial flows of information, often of limited use. Impact evaluation is at an early stage; only limited amounts of data are available. Furthermore, there is a lack of coordination between projects: lessons learned in one project often do not benefit the others.

Both SUDENE and the Bank have recently cooperated in a series of seminars on monitoring concepts and procedures, but more assistance is required to improve monitoring and to make information flows more effective. In the field of impact evaluation, substantial assistance is still required, and much remains to be done.

Organizational arrangements for M&E have differed from project to project; however, in all cases, both the monitoring and evaluation functions were clearly identified and units created to implement one or both functions. While appraisal reports give sufficient information on the broad scope and organizational arrangements of M&E, it is clear, in retrospect, that insufficient attention was given to the finer and pertinent details. Furthermore, M&E design was completed during project execution instead of during the design stage. Quarterly reporting in the POLONORDESTE program has always been extensive but not particularly useful for managers. As a consequence, alternative management information systems were developed resulting in duplication. The Bank did not help the situation with the absence of detailed monitoring and reporting design during appraisal. A major lesson from this review is that reporting formats and procedures (management information systems) should be designed and agreed upon during appraisal (in many cases adapting existing models should be sufficient). This would allow for a better understanding of project organizational links, save the time of project management during the critical start-up period, and avoid report submission delays in the early implementation period. Similarly, detailed design of impact evaluation should also be done at appraisal; at that stage, a clear determination is needed as to how and to what extent the achievement of project objectives will have to be measured. Survey design is not a function of costs or population size but rather of the number of characteristics to be measured, their variability, and the degree of precision sought. In retrospect, it is also clear that project impact evaluation efforts have not been designed from an overall program point-of-view. As a result, elaborate evaluation systems were usually designed for each project. Even though Northeast Brazil is not an especially homogeneous region, there have been many similarities between project approaches and objectives, and therefore identical impact evaluation would not have been required for all projects. For some projects, the in-depth longitudinal farm survey could have been used, for others, sociological case studies, and for others, probably no more than simple productivity surveys.

There have also been substantial problems during implementation in reaching the M&E objectives defined at appraisal. The start-up of M&E has been delayed in most cases, in large part a result of incomplete design. Staffing problems (either understaffing, turnover, or reorganization) have also affected M&E implementation in many instances, and sometimes staff were assigned other duties to the detriment of their M&E functions. Duplication between reporting systems was noted in many cases, and many projects developed their own internal management-oriented reporting systems. Also,

it appears that managers did not find M&E functions very useful perhaps due to a lack of understanding. In cases where they were separate, there was often tension between monitoring and evaluation units; but also in many cases there was considerable enthusiasm among hard-working staff to make M&E work and a general interest in its functioning. Regretfully, experience levels of staff in M&E units were not always what was required, especially in relation to survey design, yet little technical assistance was provided. Often fewer consultants were recruited than envisaged, and neither SUDENE nor Bank staff filled that gap by providing detailed technical assistance even though an interest in such assistance was regularly expressed (at the M&E unit working level).

Substantial efforts have been made to correct these problems in monitoring and impact evaluation systems; however improvements have come slowly. In terms of monitoring, SUDENE has been experimenting with simplified reporting formats. A workshop on monitoring resulted in a clearer understanding and consensus about monitoring. A consultant specialist revised the approach to impact evaluation, and his recommendations for a minimum evaluation scheme were discussed during another workshop in Recife. These proposals have been well received. On the conceptual level, therefore, much progress has been made, but in practical terms, much remains to be done before new systems can become operational. This review of experience with monitoring and evaluation in these nine integrated rural development projects has resulted in the following recommendations:

(1) Detailed "engineering" of M&E should be done during preparation but certainly not later than appraisal.

(2) A standardized methodological framework for the design of M&E components should be used, but the monitoring function should be separated from the evaluation function.

(3) Monitoring provides management information which is essential for each project. Monitoring should, therefore, not be a separate component but be integrated into the project. Monitoring is not an end in itself: it collects data to provide information in the right quantities at the right level while at the same time tries to avoid duplication in reporting.

(4) During the initial design of a project's reporting system (preparation and appraisal), previous Bank experience should be taken into account.

(5) Quarterly reports should be designed to fulfill most of the information needs for Bank supervision, and supervision missions should refrain from demanding additional special reports.

(6) Effects of the overall decision-making structure on the project need to be investigated, and management information flows should be designed with this in mind.

(7) The term "monitoring" could be usefully replaced by "project management information reporting", defined as a data collection and reporting system for management and supervision, and would cover financial, physical implementation and delivery reaction (adoption) data in sufficient detail to execute the project, report on its progress and produce the Project Completion Report.

(8) Evaluation of individual projects needs to be linked to an overall program of evaluation efforts.

(9) Project designers need to have a clear understanding of the different evaluation methodologies and the significance of their results, and should decide, on the basis of how they want to measure achievements in relation to project objectives, which methodology is appropriate. In this context, project objectives should be set realistically and indicators of expected performance at different stages built into the project design.

(10) There would be advantages in getting experienced universities or other outside institutions involved in well-designed and well-managed impact evaluation programs.

(11) Baseline or benchmark surveys need to be executed before a project starts.

(12) More detailed engineering of impact evaluation is needed during project design, and relevant expertise should be made available for that purpose during the project preparation and appraisal stages.

(13) The Bank as well as the borrowers have a vested interest in well-executed impact evaluations; therefore, it would be worthwhile for the Bank to provide more expertise to supervise and provide technical assistance for the implementation of impact evaluation components. A farm survey, similar to the Bank-financed research survey conducted in 1973/74, might contribute to the impact analysis of POLONORDESTE as a whole.

POLONORDESTE plays an important roll in the effort to alleviate poverty in Northeast Brazil. As can be seen from this review, monitoring and evaluating this program has been hampered by many factors. As a result, we have only limited knowledge about the impact of these activities on the target beneficiary. Steps to further improve monitoring and evaluation in Northeast Brazil have been taken, but much remains to be done. At present, we have reached a crossroads; concepts which have been evolving over time now need to be translated into concrete actions. With its experience, the Bank can play an important role in achieving this.

The Monitoring and Evaluation Unit in the Bank's Agriculture and Rural Development Department might need strengthening to implement the recommendations of this study. A handbook for monitoring and evaluation of agricultural and rural development projects has been published by the Bank; however, wider dissemination within the Bank is needed. For that purpose, it is recommended that regular Bank seminars be organized, much along the lines of earlier residential seminars that have dealt with related rural development issues. Seminars in the developing countries have proven to be useful in disseminating information among project officials.

BUILT-IN PROJECT MONITORING AND EVALUATION: RURAL DEVELOPMENT IN NORTHEAST BRAZIL

I. INTRODUCTION

1.01 This report reviews the monitoring and evaluation experiences of nine rural development projects[1/] in Northeast Brazil (see Annex 1, Tables 1 and 2 for details and references).[2/] Loans for these nine projects, totaling US$283.7 million, were approved between 1975 and 1982;[3/] Bank financing accounted for about one-third of total project costs of US$823 million[4/] (see Annex 1, Table 3 for details). Although project concepts have evolved over time,[5/] these nine projects have many common characteristics: they are poverty-oriented, aimed at the smaller farmer, follow an integrated, multi-sectoral approach (i.e., include a substantial number of components covering, at least, agricultural support, credit,[6/] roads, health and education) and are executed in a limited, well-defined

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1/ These are the Rio Grande do Norte (Loan 1195-BR), Ceara (Loan 1488-BR), Paraiba (Loan 1537-BR), Bahia (Loan 1598-BR), Sergipe (Loan 1714-BR), Pernambuco (Loan 1728-BR), Ceara II (Loan 1924-BR), Piaui (Loan 2015-BR), and Maranhao (Loan 2177-BR) Rural Development Projects.

2/ By end FY82, the Bank had made 25 loans in support of agricultural development totaling almost US$1.0 billion: two for agro-industries; two for livestock development; one for grain storage; two for agricultural research; one for improved extension and 17 for various settlement, irrigation and rural development projects (see Staff Appraisal Report, Second Bahia Rural Development Project, Report No. 4249b-BR dated April 1, 1983). Two more projects (Third Agro-Industries and Second Bahia), totaling almost US$0.5 billion, were approved in FY83. General sector background is provided in Report No. 3305-BR dated September 1981, A Review of Agricultural Policies in Brazil (also issued as a red cover World Bank country study in 1982).

3/ End FY82 is the cut-off date for purposes of analysis in this report. The Second Bahia Rural Development Project (Loan 2269-BR for US$67.8 million) was approved on April 26, 1983.

4/ In addition, complementary activities are funded by Government; for three projects these are estimated at US$164 million (details in Annex 1, Table 3).

5/ For example, land regularization has become an important component in the later projects.

6/ Credit was not included in the last three projects and had to be financed as a complementary activity, but it was again included in the Second Bahia Rural Development Project.

geographical area.[7]/ Furthermore, these projects are part of the much larger Brazilian Development Program for Integrated Areas in the Northeast (POLONORDESTE). A monitoring and evaluation component was included in each of these projects. Project implementation has not been without problems, including substantial delays in execution. As a consequence, disbursements are low[8]/ (see Annex 1, Table 4).

1.02 Bank financing for agricultural development in the Northeast has not been limited to these rural development projects. Earlier Bank loans were made for settlement and irrigation. The Alto Turi Land Settlement Project (Loan 853-BR), approved in 1972, has been completed.[9]/ Follow-on activities have been incorporated into the Maranhao Rural Development Project (Loan 2177-BR), approved in 1982. The Bank also made two loans for irrigation development in the Sao Francisco Valley.[10]/ However, these three projects have not been included in this study, nor have the two rural development projects executed in the State of Minas Gerais.[11]/

1.03 The latter two rural development projects in the State of Minas Gerais share many similarities with the nine rural development projects under review, but because they have not been executed within the POLONORDESTE framework, they have been excluded from the current analysis.[12]/ Implementation experiences with the integrated rural development projects in Minas Gerais have been different from the experiences in the Northeast. This is

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7/ However, the Ceara II Rural Development Project has been prepared on the basis of a State-wide planning exercise.

8/ As of June 30, 1982, about US$38 million had been disbursed on loans totaling US$283.7 million. By February 28, 1983, disbursements amounted to US$56.0 million; by January 31, 1984, disbursements had risen to US$86.4 million (see Annex 1, Table 4).

9/ See Project Performance Audit Report - Brazil Alto Turi Land Settlement Project, OED Report No. 4242 dated December 29, 1982.

10/ Lower Sao Francisco Polders Project (Loan 1153-BR - US$23 million, August 4, 1975) and Sao Francisco Second Irrigation Project (Loan 1729-BR - US$28 million, June 20, 1979).

11/ Minas Gerais Rural Development Project (Loan 1362-BR - US$42 million, February 23, 1977) and Minas Gerais Second Rural Development Project (Loan 1877-BR - US$63 million, September 15, 1980).

12/ This does not imply, however, that there could not be useful cross-fertilization between monitoring and evaluation experiences under these two projects and the nine Northeastern Brazil projects. In fact, maximum cross-fertilization and coordination should be encouraged.

reportedly[13]/due to the fact that these projects are not part of a larger, federally-funded program (the State deals directly with international organizations such as the World Bank and funds major parts of its integrated rural development projects from its own resources).

II. NORTHEAST BRAZIL

Regional Characteristics and Setting

2.01 A discussion of the Northeastern regional setting and development constraints is presented in two excellent Bank reports,[14]/ but a brief summary is included here to provide background information. Basically, Brazil's Northeast contains the largest concentration of poverty in Latin America.

2.02 Since the late 1800's, the Northeast has been officially viewed as Brazil's foremost "problem area". The country's wealthiest region during the sugar boom of the colonial period, the Northeast subsequently lagged behind as industrial, agricultural and commercial activity shifted south. Wide inter-regional income and socio-economic disparities have persisted over many decades. With nearly 30% of Brazil's total population, the Northeast at present accounts for only 13% of the gross national product, and over 70% of the families in the region are considered poor. In 1979, per capita income in the Northeast was about US$800, or 40% of the national average. Within the region there are substantial disparities between the rural and urban populations. Over 70% of all Northeastern families earned, including income in kind, two minimum wages[15]/ or less in 1979.

2.03 The Northeast[16]/ covers 1.5 million square kilometers or 18.2% of the country's total land area; its population in 1980 was estimated

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13/ Integrated Rural Development in Latin America, Richard L. J. Lacroix, AMEC, Inc., June 1983.

14/ Rural Development Programs for Brazil's Northeast: An Interim Assessment, Report No. 3938-BR dated February 7, 1983 (hereinafter referred to as the Interim Assessment), later published as a red cover country economic report; and Rural Development Options and Issues in Northeast Brazil, Report No. 665a-BR dated June 23, 1975.

15/ Equivalent to US$321 per capita.

16/ The Northeast, as defined by the Brazilian Institute of Geography and Statistics, includes the States of Maranhao, Piaui, Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe, Bahia and the Federal Territory of Fernando de Noronha.

at almost 35 million. The Northeast is heterogeneous in terms of climate, topography, vegetation and economic social characteristics. Furthermore, as history has repeatedly shown, the region is extremely vulnerable to drought. The zona da mata, a small forest zone along the coast, contains about one-third of the population and is generally favorable for agriculture; it has a major proportion of the Northeast's industry and plantation agriculture (sugarcane and cocoa). The agreste, a transitional zone between the humid zona da mata and the semi-arid sertao, has a landscape which is highly variable; the natural fertility of the soils is medium to low. The rural economy is dominated by mixed farming for domestic markets as well as the raising of beef and dairy cattle. The sertao is the largest subregion and the one most prone to periodic droughts, and has variations in climate and soils permitting a diverse rural economy. Extensive cattle raising and extraction of drought-resistant plants predominate in the semi-arid areas, with fruits, vegetables, cassava, sugarcane and other crops predominating in the cooler, more humid uplands. The middle north is a transitional zone between the semi-arid sertao and the humid Amazon region. The central and western parts are still in the process of frontier expansion, but in the areas of older settlement (coastal areas have been settled since the colonial days), extensive cattle raising and subsistence agriculture predominate, with significant palm-related extractive activities. Rice is also an important cash crop. On the frontier, slash-and-burn agriculture, followed by conversion to pasture, is the traditional form of land use.

Table 1: POPULATION AND AREA BY ZONE

	Zona da Mata	Agreste	Sertao	Middle North
Area (%)	8	16	51	25
Population (%)	30	18	33	19

2.04 The agricultural sector is characterized by low labor productivity.[17] The prime factor accounting for the growth in agricultural output during the first half of the 1970's was the expansion of the cultivated area. In the second half of the decade, output growth stagnated.[18]

2.05 A well-known feature in the region is the highly skewed land tenure structure. The region's rural economy is characterized by the so-called "minifundeo-latifundeo" complex in which many small subsistence farms coexist with a few large farms, the latter largely devoted to plantation agriculture or extensive cattle raising. Farms under 10 ha account for 70% of total establishments but only 5.5% of the land area; farms larger than 1,000 ha

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17/ In addition, it has now been well documented that intensity of both land and labor use declines rapidly as farm sizes rise.

18/ In addition, year-to-year changes in production have been erratic, basically because of climatic variations.

comprise less than 1% of total establishments but nearly 30% of the area.[19]/ Out-migration is another condition existing in the Northeast. Rural nordestinos, pushed by the effects of periodic droughts and insecure land tenure situations, have been leaving the region for many decades in search of better opportunities in the cities of the Northeast and Southeast, or in the agricultural frontier zones of Amazonia and the Centerwest. Principal constraints to rural development are:

(i) generally widespread poor soils;

(ii) droughts which, on average, afflict the Northeast every 8-10 years;

(iii) erratic rainfall during the crop cycle; and

(iv) lack of access to land on a secure basis, generally considered the most important barrier to agricultural development in the Northeast.

Bank Interventions

2.06 While there has been a long history of deep concern in Brazil about regional income disparities and the extent and degree of poverty in the Northeast, hardly any external funding went to that region in the forties and fifties. In the sixties, USAID and IDB undertook extensive efforts to develop and finance projects in road construction, electric power, water supply and sewerage, and industry. This left little room for the Bank to finance many projects in the Northeast. Furthermore, the Bank's lending program for Brazil at the time was mainly concerned with supporting the Government's program for economic reform, reducing the large public sector deficit and Brazil's dependence on coffee exports, with a main criterion for project selection being ready availability. However, in the late sixties there was an increased effort by the Bank to direct more lending to Brazil's Northeast. The President of the World Bank visited Brazil and its Northeastern region in October 1968. A major Bank-FAO/CP identification mission followed in November/December 1968.[20]/

2.07 Since then, Bank financing of projects in Brazil's Northeast has increased, but slowly. A loan (of US$25 million) to Banco do Nordeste do Brasil was approved in January 1970 (Loan 656-BR);[21]/ part of the Agricultural and Technical Education Project (Loan 755-BR, US$8.4 million, approved

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19/ Another striking statistic is that the 223 largest farms (each over 10,000 ha) control more land than the 1.7 million smallest (each under 10 ha).

20/ This mission identified various projects and resulted in Bank financing of the Alto Turi Land Settlement Project (Loan 853-BR) and the Sao Francisco Irrigation Projects (Loans 1153-BR and 1729-BR).

21/ See also PPAR, Banco do Nordeste do Brasil (Loan 656-BR), OED Report No. 1672 dated July 27, 1977.

in March 1971)[22] was situated in the Northeast; and the Alto Turi Land Settlement Project, approved in July 1972 (Loan 853-BR, US$6.7 million), was the first Bank-financed agricultural project in Northeast Brazil.[23] Following a major review of the region's economy,[24] Bank interventions in the Northeast, mostly in the rural sector, increased rapidly, especially in the second half of the seventies. Nine integrated rural development projects were funded in the period 1975-82 (for summary project descriptions, see Annex 2); a major evaluation of that effort has now been made.[25]

Table 2: BANK-FINANCED POLONORDESTE PROJECTS/a

Name	Loan No.	Loan Amount US$ mln.	Approval Date	Beneficiaries /b
1. Rio Grande do Norte	1195	12.0	12/75	15,000
2. Ceara - Ibiapaba	1488	17.0	09/77	5,800
3. Paraiba - Brejo	1537	24.0	03/78	7,400
4. Bahia - Paraguacu	1589	37.0	06/78	17,000
5. Sergipe - Tabuleiros Sul	1714	26.0	05/79	8,400
6. Pernambuco - Agreste Setentrional	1728	40.0	06/79	15,540
7. Ceara II	1924	56.0	12/80	60,000
8. Piaui	2015	29.0	06/81	11,300
9. Maranhao	2177	42.7	06/82	24,000
		283.7		164,440

/a For further details, see Annex 1.
/b As estimated at appraisal (direct farmer beneficiaries).

2.08 In addition, two irrigation projects in the Sao Francisco Valley were financed (Loans 1153-BR and 1729-BR for US$23 and US$28 million,

22/ See also PPAR, First Education Project (Loan 755-BR), OED Report No. 2802 dated January 9, 1980.

23/ See also PPAR, Alto Turi Land Settlement Project (Loan 853-BR), OED Report No. 4242 dated December 29, 1982.

24/ Rural Development Issues and Options in Northeast Brazil, Report No. 665a-BR dated June 23, 1975.

25/ Interim Assessment, op. cit.

respectively)[26]/ between 1975 and 1982. Other Bank projects in the Northeast during this period have included: Northeast Power Distribution (Loan 1300-BR, US$50.0 million);[27]/ Northeast Water Supply and Sewerage (Loan 1656-BR, US$100 million);[28]/ Northeast Basic Education (Loan 1867-BR, US$32.0 million);[29]/ and Recife Metropolitan Regional Development.[30]/[31]/

2.09 In order to gain better insight into the development constraints of the Northeastern region of Brazil, a research project (No. 670-73) was begun in 1973 by SUDENE (the Superintendency for the Development of the Northeast) and the World Bank's Development Research Center (DRC). Its aim was to undertake the first comprehensive quantitative analysis of Northeastern agriculture and in so doing helping to develop SUDENE's capability for planning and analysis. The research project undertook a large-scale survey of agriculture (8,000 farms from all 9 States). Data from the survey were analyzed econometrically and used by DRC to develop a linear programming model of Northeastern agriculture. The results of the research were published in 1981 (eight years after the research had begun) in an excellent book by Garry P. Kutcher and Pasquale L. Scandizzo.[32]/ Summary findings were published in the Spring 1981 issue of Research News and have been reproduced in Annex 4 for ease of reference. The research project's contribution to the initial design of Bank-financed rural development projects in Northeast Brazil has been minimal and has taken place later and less directly than originally planned. The project was unsuccessful in its institution-building objectives, and the programming model is not being used, although the data base,

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26/ See also Appraisal Report of the Brazil Lower Sao Francisco Polders Project, Report No. 714a-BR dated May 16, 1975 and Staff Appraisal Report, Brazil Sao Francisco II Irrigation Project, Report No. 2265a-BR dated June 4, 1979.

27/ See also Appraisal Report of the Northeast Power Distribution Project, Brazil Centrais Electricas Brasileiras, S.A. (Electrobras), Report No. 1088b-BR dated June 10, 1976.

28/ See also Appraisal Report of the Brazil Northeast Water Supply and Sewerage Project, Report No. 2183b-BR dated January 17, 1979.

29/ See also Appraisal Report of the Brazil Northeast Basic Education Project, Report No. 2815b-BR dated April 28, 1980.

30/ See also Appraisal Report of the Recife Metropolitan Region Development Project, Report No. 3863b-BR dated May 12, 1982.

31/ One project was approved, in FY83: Second Bahia Rural Development Project (Appraisal Report No. 4249b-BR dated April 1, 1983).

32/ The Agricultural Economy of Northeast Brazil, Garry P. Kutcher and Pasquale L. Scandizzo (Johns Hopkins University Press, Baltimore, 1981).

with a user guide, has been entered in a computer at the Bank of the Northeast.[33/] However, one result has been that since the early 1980's, substantial land regularization components have been included in Bank-financed rural development projects. No follow-up survey is under consideration at present (see also para. 5.07).

Development Programs and Institutions

2.10 Two major approaches[34/] to rural development in the Northeast are now being taken by the Government of Brazil. One is directed toward integrated development of specific regions. This is done within the POLONORDESTE framework, which concentrates on increasing the production and productivity of small farmers by combining the provision of agricultural support services with physical infrastructure and social services. The other approach involves programs[35/] specifically concerned with alleviating the effects of regular droughts through provision of drought relief and the improved use of scarce water resources.

2.11 The concern with Northeastern development has expressed itself historically in a series of evolving interventions, and direct federal involvement in the region has been ongoing for more than 90 years. Initial efforts were based on the assumption that drought-proofing was basically an engineering problem and, therefore, technical solutions could be found. Over time, however, the socio-economic origins of poverty were recognized as was the complexity of the development process. With the creation of SUDENE in 1959, regional planning and multi-sectoral development activities became the major focus. Industrialization subsequently became the priority in the 1960's. It was only in the 1970's that rural development received particular attention. Nevertheless, progress recorded to date has been disappointing: poverty remains a serious problem, agricultural productivity continues to lag, the region has not really become drought-resistant, and little progress has been made toward land redistribution, generally regarded as the major obstacle to development in the Northeast.

2.12 The regional history of the past 20 years is, in many respects, SUDENE's history.[36/] With the proliferation of agencies directing efforts in the Northeast, the federal government felt the need for closer coordination. Following publication of the "Furtado" report by the working group for

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33/ To date, three PhD dissertations and ten Master's degrees theses by Brazilians are known to have been based on the data generated by the study.

34/ This does not imply that there are no other federal interventions in the region, but these two are the principal ones.

35/ Such as the Emergency Drought Relief Program, the SERTANEJO Project, Water Resource Use Program (PROHIDRO), the Semi-Arid Tropics Research Program, and several irrigation projects.

36/ For a more extensive and excellent account of SUDENE's and the Federal Government's involvement in the Northeast, see Interim Assessment, op. cit., Chapter III.

Northeast development, SUDENE was established in 1959, headquartered in Recife. The formal powers given to SUDENE were wide-ranging and included control over all ongoing activities and investments in the region plus responsibility for drought emergency measures. In addition, the agency administered a powerful array of fiscal and credit incentives aimed at attracting new private investment to the region.

2.13 Although the agricultural sector was not neglected during the 1960's, SUDENE'S overwhelming priority was industrialization. However, by the end of the decade, the promotion of capital-intensive industrial structures in a region characterized by chronic unemployment became increasingly criticized. By then only part of the original development strategy had been implemented. SUDENE's prestige had fallen progressively, partly a result of increased centralization in federal decision-making, and it was vigorously attacked for inefficiency in handling emergency work relief following the 1970 drought. SUDENE's earlier experience with settlement was also disappointing.37/ As a result, a major reformulation of regional development policies got underway, ultimately resulting in the establishment of two new sources of funding for certain types of development programs:

- The National Integration Program (PIN) was established in 1970. This program would link the development of the Northeast with Amazonia; irrigation was to be associated with anti-drought measures.38/

- The Land Redistribution and Agro-industrial Modernization Program (PROTERRA). This program would facilitate land acquisition, improve rural labor conditions and provide for agro-industrial development in the Northeast and Amazonia. It would be executed by the federal land institute (INCRA) rather than SUDENE.

However, the performance of the new programs was unsatisfactory, and in the mid-1970's, Government directed funding toward a new series of programs. Among them were POLONORDESTE (paras. 2.14-2.18) and The Special Program for the Development of Semi-arid Region of the Northeast (SERTANEJO). The latter program placed emphasis on small-scale irrigation in conjunction with the cultivation of drought-resistent pasture and crops in "nucleus" areas in the sertao.

37/ Over a ten-year period it settled only 880 families in the Alto Turi area. (The original plan called for 25,000 families on 1.5 million ha in Maranhao State over a five-year period.) This was later incorporated and expanded upon in the Bank-financed Alto Turi Land Settlement Project.

38/ The program proposed: (i) the opening up of the Amazon region via new highway construction and the subsequent settlement of 70,000 families; (ii) irrigation of 40,000 ha in the Northeast; and (iii) creation of export corridors in the Northeast.

2.14 POLONORDESTE, established in 1974, provides for the financing of a combination of physical infrastructure and services in areas of good agricultural potential (growth poles), to increase the productivity of small farmers. In order to get the program underway, resource allocations initially had to be made for projects which were not completely ready for implementation due to inadequate identification and preparation of project objectives and program goals. The result was a program which inevitably started slowly, with a diversity of approaches. By end 1982, POLONORDESTE had financed 43 integrated rural development projects (PDRIs) and four colonization projects. Together they covered a physical area equal to slightly more than half of the Northeast. The nine aforementioned Bank-funded projects are part of POLONORDESTE, although they are not necessarily representative: a few are older, most are larger and generally have been better protected from recent counterpart funding reductions than the average project.

2.15 The administrative structure of POLONORDESTE is extremely complex. It is characterized by multiple levels and agencies, overlapping functions and complicated mechanisms for the allocation and transfer of funds. The project is administered at four levels: federal, regional, state and local, and its planning and management systems can best be described as top-down. Annual allocation of resources to the program is decided in Brasilia. Elaborate coordination is required both vertically and horizontally between project technical units (UTs) and implementing agencies, both at the headquarters level and in the field. As a result, reporting and accounting requirements are substantial.

2.16 At the state and local levels, administration is coordinated by UTs situated in the Secretariats of Planning or Agriculture. The states Agricultural Planning Commissions are normally involved in project preparation, and in some cases with project evaluation. There are state level Governing Councils consisting of representatives from SUDENE, state agencies and state secretariats involved in project implementation, and participating banks. Governing Councils, in general, meet infrequently, but in some cases subcommittees at the technical level have been established to assist in decision-making. Projects, however, are implemented by state and federal line agencies over which UTs have little or no control. The effectiveness of the UTs, therefore, depends greatly on the support they receive from the state secretariats in which they are located.

2.17 At the federal level, the Ministry of Interior is responsible for coordination and policy-making. At the regional level, SUDENE is responsible for coordination, including setting overall and sectoral guidelines; it also provides assistance to the states in project preparation and monitoring and liaising with federal agencies. A POLONORDESTE coordination group was set up for this purpose in SUDENE.[39]/ However, SUDENE's influence on the program

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39/ The group was reorganized in late 1981 into five "implementation units", each assigned two states, and a new group for overall financial planning and evaluation of the program.

has gradually declined, while the states have expanded their capacity to plan and execute integrated projects, and various state and federal line agencies have assumed increasing responsibility in areas affecting the program.

2.18 A few points are worth emphasizing. First, the Bank's rural development projects in the Northeast are executed exclusively within the POLONORDESTE framework, which is only one of many programs aimed at promoting development in the Northeast. In most cases, POLONORDESTE represents only a small part of an implementing agency's total activities. The administrative organizational set-up of POLONORDESTE is one of multi-dimensional complexity; many actors are involved, all requiring information. This has resulted in unwieldy monitoring systems producing substantial flows of information, often of limited use. Second, impact evaluation is at an early stage, and although data availability for measuring the impact of these projects varies, in general, our knowledge about the impact of POLONOROESTE remains limited. And third, there is a lack of coordination between projects; lessons learned from experience with one project are often not applied to another. Both SUDENE and the Bank have participated in a series of seminars on monitoring concepts and procedures, but more assistance is necessary to improve monitoring and to make information flows more effective. In the field of impact evaluation, substantial assistance is still required, and much remains to be done.

III. MONITORING AND EVALUATION

Organizational Background

3.01 As shown above, the administration of Northeast rural development efforts is complex, and this, of course, places substantial demands on the monitoring system. Each POLONORDESTE project is executed by existing agencies but is administered and coordinated by a project management or technical unit (UT). These UTs either come under the purview of the state Secretariat of Planning, the state Agricultural Planning Commission (CEPA), or the state Secretariat of Agriculture.[40/] Given that most states have more than one POLONORDESTE project, UTs are often subdivided into specific project management units.

3.02 Within this overall framework, organization of monitoring and evaluation is a small but important part. The specific modeling (see paras. 3.04-3.14) of such components depends, to a large extent, on the project organizational framework but it can also depend on the monitoring and evaluation philosophy of the particular project designers. For the nine

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40/ Field experience suggests that there is no variance in project performance based on different sponsoring Secretariats.

Bank-financed rural development projects, the institutional arrangements for monitoring and evaluation were designed as follows (for full details see Annex 3):

- Rio Grande do Norte. A separate monitoring and evaluation group was created in the project unit to collect and analyze information on project area and impact. During execution, the monitoring unit in the UT expanded (to cover all POLONORDESTE projects in the State), and an evaluation unit was created under the direct responsibility of CEPA.

- Ceara. A special monitoring and evaluation unit, outside the project unit but within CEPA,[41]/ was established. This unit's focus was on evaluating the impact of various project components in the project area and the performance of participating agencies. Quarterly reports by executing agencies were to be condensed by the project manager into one report. Under the second Ceara project (a statewide project), this model was changed, and a monitoring, evaluation and studies section was established under the Project Coordinating Management Unit. This section was responsible for: (i) monitoring results of each component; (ii) farm productivity surveys; (iii) project evaluation; and (iv) planning, contracting and interpreting technical studies.

- Paraiba. Reporting was the responsibility of an assistant project coordinator for monitoring. Evaluation of the project's effects and impact was handled by a special unit under CEPA. The latter unit would be responsible for: (i) completing the baseline socio-economic survey; (ii) farm and social surveys; (iii) studies of particular issues and problems; and (iv) mid-term and ex-post evaluations.

- Bahia. Project monitoring was the responsibility of a subgroup of the monitoring, planning and studies section in the project unit. This subgroup was not only responsible for monitoring the outputs or results of each component but also for administering the annual productivity surveys. A separate, small evaluation group was initially located within CEPA[42]/ to be responsible

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41/ The technical unit was also responsible to CEPA.

42/ In actual fact, the idea of a separate evaluation unit has never been well received by project implementers, and de facto the two units have been merged within the project unit.

for evaluation studies primarily carried out by consultants with a possibility of long-term involvement by a Brazilian University.[43]/

- Sergipe. The monitoring/planning group was responsible for project monitoring, long-term planning and special studies. Within this group, the monitoring unit was responsible for gathering data on results, broken down by components, but also for administering productivity surveys during the first, third and fifth years. Project evaluation was to be done by a separate unit established within CEPA.

- Pernambuco. An assistant project coordinator in the project management unit had responsibility for monitoring. His sub-unit would prepare quarterly monitoring reports and also assist the evaluation team in data gathering. Project evaluation is carried out by the Integrated Masters Program for Economic and Social Studies of the Federal University of Pernambuco. This evaluation exercise consists of baseline studies, on-going evaluation of project implementation and ex-project evaluation.

- Piaui. A planning, monitoring and evaluation sub-unit was created to keep up-to-date records on physical implementation progress, conduct short-term studies on specific implementation problems, contract and supervise major evaluation studies (either by consultants or universities), consolidate annual work programs and budgets, and generally manage the project's monitoring and evaluation systems.

43/ Similar arrangements have been made under the recently approved (April 1983) Second Bahia Rural Development Project (SAR No. 4249b-BR dated April 1, 1983). A project monitoring system based on the one currently being used by the first project would be established and managed by UT. An annual review of project impact on agricultural activities would be made at the end of the production cycle. Project attainment of objectives in health, education and community development would also be reviewed annually by UT staff and SUDENE. When completed, these impact reports would be incorporated into the regular quarterly reports. Evaluation activities would be periodic, indepth attempts to assess the effects of project-financed services and infrastructural development on the natural environment and on the incomes and welfare of those families the project is supposed to assist. This would be undertaken by a centralized unit within the project unit. Evaluation work would focus on a baseline study, mid-term review and a completion report. The evaluation unit would also be responsible for ad hoc special studies to be commissioned during project execution. Certain studies could be contracted to competent outside consultants or institutions (SAR, paras. 5.06 and 5.07).

- Maranhao. Each regional project management unit[44/] includes an internal monitoring system. These sub-units carry out selected case studies of small samples of beneficiaries. Evaluation (including longitudinal studies consisting of baseline, mid-term and post-project surveys) is the responsibility of an independent unit directly responsible to the State POLONORDESTE coordinator.

3.03 In summary, three different organizational models have been used for monitoring and evaluation:

Table 3: M&E ORGANIZATION MODELS

M&E Model	Projects in which applied	Projects in which originally applied but later changed
A. M&E unit part of project management	Ceara, Piaui, Bahia	Rio Grande do Norte
B. M&E unit outside project management	------	Ceara I
C. Monitoring part of project management; evaluation by outside entity	Paraiba, Sergipe, Pernambuco, Maranhao, Rio Grande do Norte	Bahia

In the model where monitoring is separate from evaluation, the degree of linkage between the outside entity responsible for evaluation and the project management unit can vary (e.g. in the Maranhao case, evaluation is the responsibility of a unit directly responsible to the state's POLONORDESTE coordinator, to whom the project management units also report, but in the Pernambuco case, evaluation is the responsibility of a federal university totally independent from any executing agencies). However, evaluation units normally come under the responsibility of CEPAs.

System Design

3.04 The design of monitoring and evaluation systems is important and requires indepth analysis of a project's organizational framework and objectives. Organizational linkages, management information requirements,

44/ The Maranhao project consists of three separate subprojects.

decision-making authority etc., all need to be analyzed[45/] before data requirements for decision-making at various levels can be determined and the management information system designed. Similarly, a project impact evaluation system can only be designed in detail if the project's development objectives are clearly spelled out and decisions made as to how and to what degree achievements in reaching those objectives are to be measured. In retrospect, it is clear that for most projects, even though a substantial amount of time was spent during appraisal determining the broad outlines and organizational modeling of monitoring and evaluation, insufficient attention was given to the finer and more pertinent details.

3.05 Monitoring and evaluation design was left incomplete during most appraisals.

> "During and after familiarizing itself fully with the project, the monitoring group would decide on the information necessary to monitor and evaluate" (SAR, Rio Grande do Norte, Annex 8, para. 3).
>
> "The monitoring and evaluation scheme described here is a tentative suggestion which requires further consideration by the project management unit. During negotiations, assurances were received that the project management unit would provide to the Bank for approval detailed evaluation plans by December 31, 1978" (SAR, Bahia, Working Paper No. 13, para. 24).[46/]
>
> "The evaluation scheme described here is a tentative suggestion requiring further consideration by the project management unit." During negotiations for this project assurances similar to those for the Bahia project were obtained (SAR, Sergipe Working Paper No. 17, Annex 1, para. 3).[47/]

In almost all other projects considerable assistance by consultants was envisaged to help with detailed design of monitoring and/or evaluation systems, and these designs and plans required Bank approval before their implementation. This shows that the design of monitoring and evaluation

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45/ On this subject see also: The Design of Organizations for Rural Development Projects - A Progress Report, World Bank Staff Working Paper No. 375, March 1980.

46/ Actual wording in the final legal and appraisal documents is slightly different but conveys the same tentativeness in monitoring and evaluation design.

47/ In addition, both the Bahia and Sergipe legal documents contained assurances that data standardization and monitoring procedures, as well as productivity survey design and analysis procedures, would be established, with the help of consultants, and submitted to the Bank for approval before their implementation.

components, certainly at appraisal but also at the time of Board approval, was incomplete,[48] and that start-up delays of such components were, therefore, unavoidable.[49]

3.06 As can be seen from Table 4 below (see also Annex 1, Table 6 for details), appraisal documents discussed M&E design in sufficient detail to show how M&E systems were going to be organized, even though the more pertinent details were left incomplete. In many cases, further details about system set-up were provided in supplementary staff working papers.

Table 4: MONITORING AND EVALUATION COVERAGE AT APPRAISAL/a

	Staff Appraisal Report			Separate Working Paper	Part of Working Paper
Project Name	In Main Text	In Separate Annex	As Part of Annex		
Rio Grande do Norte	Yes	Yes	-	-	-
Ceara	Yes	-	Yes	-	-
Paraiba	Yes	-	Yes	Yes	-
Bahia	Yes	List	-	-	Yes
Sergipe	Yes	-	-	-	Yes
Pernambuco	Yes	List	-	Yes	-
Ceara II	Yes	List	-	-	Yes
Piaui	Yes	Yes	-	Yes	-
Maranhao	Yes	-	-	-	List

/a Yes = covered in that particular part of the appraisal documentation.
List = Listing of component key indicators only.

3.07 Although not directly related to the subject of this study, an inadequacy in the Bank's filing system was discovered while doing research for this study which is worth mentioning here. With the introduction of the new Staff Appraisal Report (SAR) format, a project file system was established in which background documents, working papers, drawings, etc. would be contained (see OMS 3.04, especially Annex B). However, none of the supplementary staff working papers related to monitoring and evaluation listed in the SAR Annexes could be found in Regional files (even though all

48/ One could argue that this is contrary to Bank requirements for more rather than less detailed design by the time the project is presented to the Board.

49/ Design has to be completed before implementation can start.

but one could be obtained from the division concerned). In many cases, these working papers reflect project design at yellow cover stage and are not always updated in line with further SAR processing. Therefore, it is suggested here that, after more than five years' experience with the new SAR system, there might be a need to review the effectiveness of the project file system.[50/51/]

3.08 Quarterly reporting requirements for POLONORDESTE projects have always been extensive.[52/] As a result, quarterly reports were not found to be particularly useful by project management[53/] or by the supervising ministries in Brasilia. The Ministry of Interior designed a separate, disbursement-oriented quarterly reporting system (SAPE-GRAFF). The Bank neither explicitly (as it participated in SUDENE seminars aimed at improving quarterly reporting) nor implicitly ever accepted SUDENE's quarterly reporting system as being adequate. None of the appraisal documents acknowledge the existence of any reporting systems. Instead, in many cases, appraisal design included the setting up of new reporting systems. In the case of the Bahia project: "standardized monitoring forms would be completed quarterly by executing agencies and forwarded to the monitoring group for synthesis into quarterly project reports... The monitoring forms would be pre-coded for computer processing to accelerate and broaden the access to project data. Once operating, monitoring by the project management unit would be chiefly a repetitive task of ensuring quarterly reports were received from executing agencies and of processing and analyzing returns. Agreement was reached during negotiations that the Project Management Unit would contract a consultant data analyst, under terms and conditions satisfactory to the Bank, to help standardize data requirements among participating agencies and establish coding and analysis procedures (with a view of extending monitoring formats, analysis and data retrieval to other POLONORDESTE projects) and provide a report on the recommended procedures to the Bank for review and comment

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50/ The above findings are not limited to this case only. OED has found in many instances that project files are incomplete. While in many cases the information can be retrieved from other sources, the point remains that project files should be complete.

51/ It was also found that items were not always filed in their proper sequence. Also, some supervision reports were not included in the files. While supervision reports can easily be retrieved from other sources, the point remains that project files should be complete.

52/ Some of the earlier quarterly reports were over 400 pages in length.

53/ Project management in many cases designed their own monthly problem-oriented component review reporting systems (mostly 3-4 pages in matrix format).

prior to their implementation..." (SAR, Bahia, para. 6.05). The Bahia project SAR (as have all subsequent SARs for rural development projects in Northeast Brazil) listed detailed key indicators for monitoring and evaluation; but none actually detailed the design of the reporting format. Under the Pernambuco project, consultants were still required to assist the project manager in setting up the monitoring system (SAR, Pernambuco, para. 4.34). For the Sergipe project, assurances were received that "the Project Administration Unit would standardize data requirements among participating agencies and establish coding and analysis procedures and provide a report on the recommended procedures to the Bank for review and comment prior to their implementation" (SAR, Sergipe, para. 6.04). Even for the more recently approved Maranhao project, assurances were again obtained that the project coordinating agencies would submit to the Bank by a certain date[54/] proposals outlining the procedures and reporting format to be followed for each sub-project and for the project as a whole (SAR, Maranhao, para. 5.12). This continued deficiency in the design of reporting format and procedures raises several issues. First, while a SUDENE reporting system existed for POLONORDESTE projects, this was apparently never accepted as being adequate by the Bank, otherwise appraisal documents would not have included assurances regarding reporting design. Second, there was apparently no learning curve;[55/] for nearly all subsequent projects, assurances continued to be required for management units to prepare proposals outlining reporting procedures and formats for approval by the Bank. This was still required for the ninth project, even though one would have expected that by then[56/] acceptable procedures and formats would have been devised and available. Third, the fact that formats and procedures for monitoring were designed for each and every project (although it was not necessarily a complete re-inventing of the wheel, in most cases it turned out to be more than simply an adaptation) must have resulted in an unnecessary waste of manpower resources for principally duplicative work, and must have kept project management preoccupied when they could have spent their time more usefully on project implementation start-up activities. The major lesson which becomes apparent from this review is that reporting formats and procedures should be designed and agreed upon during appraisal.[57/] This would allow a better understanding of project organizational links, be less of a burden on the

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54/ Approximately four months after Board approval.

55/ Although as far as appraisal reports are concerned, there obviously was a learning curve as can be seen from the various subsequent annex listings of key indicators for monitoring and evaluation.

56/ Appraisal of the Maranhao project took place almost six years after approval of the Rio Grande do Norte project.

57/ With the wealth of Bank experience it should not be too difficult to adapt pro-formas to the specific project circumstances.

time of project management in the critical start-up period,[58]/ and avoid report submission delays in the early project implementation period.

3.09 Similarly, design of the evaluation systems was incomplete. Even though many good ideas on impact evaluation design were expounded in appraisal documents, most were not pursued to their logical conclusions. Even more so than in the design of monitoring systems, one can find in the design of evaluation systems examples of the different philosophies regarding the respective roles and definitions of monitoring and evaluation. The designers of the Paraiba project established a clear hierarchy of objectives and defined monitoring and evaluation functions in relation to that hierarchy. Evaluation was divided into on-going and ex-post evaluation, and was defined as an analysis of project results. Monitoring was defined as the periodic collection of information on project inputs, activities and outputs and their comparison with the original plan.[59]/ The philosophy behind the design of the Bahia project is identical to that of the Paraiba project; the only difference is in its execution: the monitoring group would also be responsible for administering and processing the farm productivity survey because it would (i) isolate repetitive data collection from the more qualitative and reflective approach required in evaluation, and (ii) be implemented by student interns as well as by management unit specialists and would, therefore, increase staff awareness of development issues. In addition, the project also claimed the following innovative approaches: "the sociological and qualitative (in addition to quantitative) orientation of evaluation; involvement of management unit staff in field data collection; precoded monitoring forms and farm survey questionnaires; and attention to participant evaluation of project activities" (SAR, Bahia, Working Paper No. 13, paras. 24 and 25). The Piaui project introduced the concept of "beneficiary sounding" which would provide project management with a feeling as to how beneficiaries perceived the project. The random sample taken would be extremely small and, therefore, statistically not significant; only a limited number of questions would be asked, and the interviews would be carried out by regional field coordinators with respondents' answers recorded on postcards preaddressed to the monitoring and evaluation unit.

3.10 Over time, there has also been increasing concern about costs and timeliness of evaluation; such concerns have been expressed in comments made about farm surveys. The Ceara II SAR spells out that "the farm survey would cover a small sample of participant and non-participant farmers in the state. It would be conducted with a fixed format, precoded questionnaire centered on production technology, farm inputs, institutional contact and

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58/ Any fine tuning of the quarterly reports could be done by project management later in the project cycle.

59/ Monitoring and Evaluation of the Paraiba Rural Development Project, Northeast Brazil, by Guido J. Deboeck, March 1978.

support, and produce marketing" (SAR, Ceara II, para. 6.05). "The most important issue in survey design will be to minimize the data collection to the level where it balances the local processing and analysis capacity" (SAR, Paraiba, Working Paper, para. 36). In many cases, this was accompanied by tentative indications about sample size. While the idea of keeping data processing within acceptable limits and local capacity is valid, sample size is not a function of costs or the target population but rather of the number of characteristics to be measured, their variability and the degree of precision sought.

3.11 Working documents prepared for the Piaui project provide substantial detail about the (conflicting) goals of project evaluation:

> "Information on project effects and impact on beneficiaries would be collected through statistically significant surveys, covering some 50 fishermen and 210 land beneficiaries... A "control group" of some 30 fishermen and 100 farmers would be also interviewed. These sample sizes are tentative and reflect the (limited) knowledge currently available on the project area and the potential beneficiaries. They would be revised when additional information on the heterogeneity of actual project beneficiaries is obtained... The level of statistical significance required for these project evaluation activities would be rather at the lower end of the commonly accepted significance levels... Evaluations would aim at measuring changes in the technology utilized by fishermen and farmers, as well as levels of capitalization, production, income, and living standards. However, only a limited number of - usually simple - variables were selected to evaluate developments at the farmer level. For instance, only the most obvious indicators of techological change would be assessed, and no attempt would be made to directly measure variables such as yields or income. Some indications of the former would be obtained, basically through farmer recollections on total area cropped and total produce obtained (for fishermen, information on fish landings and processing would be available on a continuous basis), while the latter would be approached through two proxies: volume of production and some gross indicators of expenditure. Limited attempts would also be made to assess other variables which, although vitally important, are not the primary project goals, e.g. literacy, and some indicators of living conditions such as housing, water supply, and main household belongings. However, no attempt is envisaged to measure standard of living on a broader scope, health conditions (except for some rudimentary indications of morbidity and mortality) or nutritional status. Many other variables could have been selected for analysis. Nevertheless, a conscious effort - fully shared by Bank and project staff - was made to keep evaluation aims at a more modest level."

Such effort is worthwhile. Still, a survey meeting all the above criteria remains a formidable undertaking, the costs and scope of which can only be defined once survey design is more detailed. Without providing much detail, the Maranhao project requires "a longitudinal study consisting of baseline, mid-term and post-project surveys of about 300 producers within each sub-project." Again, such a longitudinal survey is a formidable undertaking requiring much money and manpower.

3.12 Thus, in general, the ideas and concepts (and worries) about project evaluation were well articulated, but there has not been enough detail made available on what exactly evaluation was to measure, what statistical significance was required and if the causality of project activities on the changed environment should also be measured, etc. In fact, no clear linkage has been established between project objectives and evaluation systems.

3.13 The objectives[60/] of these projects were generally wide-ranging. The Rio Grande do Norte project's "principal objective would be to develop the institutional capability and focus to conceive, plan and implement in a coordinated manner actions to increase the incomes and welfare of the target group of farm families at cost levels that would permit their replicability" (SAR, Rio Grande do Norte, para. 4.02). All projects designed since then have included objectives to increase productivity, production, incomes and the implementing capacity of the institutions involved as well as their smallholder orientation. Most projects have also included objectives to increase the welfare or well-being of the people in the project area. Some projects had extremely ambitious objectives such as to "assist in the state's effort to slow rural-urban migration...through the expansion of employment opportunities and social amenities" (SAR, Maranhao, para. 3.06), or "increase rural per capita income levels and rural employment opportunities, improve income distribution and alleviate rural-urban migration" (SAR, Pernambuco, para. 4.03). However, it is not enough to set project objectives; project designers should also decide how (and to what extent) the achievement of these objectives will be measured. For example, a statistically significant indication about the causality of project activities on improved regional income distribution or alleviation of rural-urban migration requires a very elaborate - if at all possible - exercise.

3.14 The major point arising from this review, therefore, is that it should be much clearer during the design stage what impact evaluation needs

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60/ Although there are variations and changes in emphasis, project components are similar among the various projects: they include components to improve agricultural services and physical infrastructure, increase production, and provide for better "social" (health and education) services. Land consolidation and redistribution components have become more important in more recent projects (see Annex 2 for details).

to measure and how that relates to project objectives. Of course, if this requires benchmarks for measurement, baseline surveys should be completed before project implementation begins and not as part of project implementation. Another point worth noting is that impact evaluation has been looked at in isolation. Even though Northeast Brazil is not an especially homogeneous region, there still have been many similarities between project approaches and objectives, and one could argue, therefore, that impact evaluation efforts would not have been required to the same degree for all projects. For some projects, the indepth longitudinal farm survey could have been used; for others, sociological case studies; and for others, probably no more than simple farm productivity surveys. Evaluation efforts should have been designed keeping the overall program in mind.

System Implementation and Supervision

3.15 The nine rural development projects in Northeast Brazil are complex and multi-sectoral and, therefore, involve many institutions in the field. Because they require the involvement of staff expertise scattered over many organizational units in the Bank, their supervision is quite complex. In addition to the regular semi-annual supervision missions, separate supervision of health, road and education components have also taken place at regular intervals, and special monitoring and evaluation missions have been sent regularly to Northeast Brazil:

Date of Mission	Project(s) Supervised 61/
October 1976	Rio Grande do Norte
October 1977	Rio Grande do Norte, Paraiba, Ceara
October/November 1978	Ceara, Bahia
October 1979	Ceara, Bahia, Sergipe
May 1979	Rio Grande do Norte (part of supervision mission)
October 1981	Rio Grande do Norte, Ceara, Pernambuco
March 1982	POLONORDESTE workshop on monitoring and evaluation
July 1982	Rio Grande do Norte, Pernambuco, Ceara, Bahia (OED Review)

61/ These missions were not always limited to projects in Northeast Brazil but sometimes looked at monitoring and evaluation aspects of other projects as well. For example, the October 1977 mission also reviewed monitoring and evaluation of the Minas Gerais Rural Development and Nutrition Research and Development Projects and conducted a two-day workshop in Recife with the regional monitoring group of POLONORDESTE.

3.16 In addition to the special M&E missions, most regular supervision missions reviewed the project's M&E components. Detailed information about experience with M&E implementation on a project-by-project basis is provided in Annex 5.

3.17 A review of project-by-project accounts clearly shows that there have been substantial problems in reaching M&E objectives as set out implicitly and explicitly in appraisal documents. The start-up of these components has been almost invariably delayed -- a result, to a large extent, of incomplete design. Staffing problems, either understaffing, staff changes or reorganizations, have also affected M&E implementation in many instances. Furthermore, staff were often assigned other, additional duties, usually to the detriment of their original M&E functions. Duplication between reporting systems were noted in many cases, and many projects developed their own internal management-oriented reporting systems. Also, there is unfortunately the impression that managers either did not understand or did not find M&E functions very useful. In cases where they were separate, there was often tension between monitoring units and evaluation groups. Evaluation was sometimes also too academic in its orientation. In many cases, however, there was considerable enthusiasm among hard-working staff to make M&E work and a general interest in its functioning. Regretfully, experience levels of staff in M&E units were not always what was required, especially in relation to survey design, yet little technical assistance was provided. Often fewer consultants were recruited than envisaged, and neither SUDENE nor Bank staff filled that gap by providing detailed technical assistance, even though, at the M&E unit working level, an interest in such assistance was regularly expressed.

3.18 Substantial efforts, however, have been made to improve both monitoring and impact evaluation systems, but improvements have come slowly. Bank monitoring and evaluation experts have visited Northeast Brazil at regular intervals (see para. 3.15), and continue to do so. This has culminated in a seminar on monitoring in Natal in March 1982, attended by Brazilian officials and Bank staff, and a workshop on evaluation, in October 1982, attended by Brazilian officials and a consultant. Both undertakings were, at least, a partial success.

3.19 In terms of monitoring, SUDENE has been experimenting with simplified reporting formats in both Rio Grande do Norte and Paraiba. The progress of this new system was reviewed by a Bank expert in October 1981, which provided the necessary input and background for the subsequent seminar. Despite an excessive number of participants and extensive discussion about monitoring indicators,62/ debate was lively and pertinent, and a much clearer understanding about monitoring concepts resulted, including a consensus that the two existing information systems (SUDENE quarterly reporting and the SAPEGRAFF system) should be merged. A better understanding of how monitoring

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62/ One working paper provided a list of 500 indicators, and participants found themselves in lengthy discussions to determine which should be chosen.

should not only cover financial and physical implementation information but also deal with the initial effects service delivery systems are having on the population, was achieved. While it is accepted that much information about the latter is available in executing agencies' files, the practicalities of collating, summarizing and disseminating this information have not yet been worked out.

3.20 On-going evaluation efforts at the POLONORDESTE project and program levels have been discussed between SUDENE and the Bank for some time. Following the monitoring seminar in Natal, a SUDENE team was formed to try to organize a workshop on program evaluation. Due to lack of expertise, this task could not be accomplished. UNDP and SUDENE subsequently arranged for the recruitment of a consultant specialist. This consultant reviewed present evaluation systems, proposed a minimum evaluation scheme, and presented these recommendations to an evaluation workshop (October 1982, Recife). He also made specific recommendations on how to go about the preparation of such a scheme and how much further work would be required (with further consultancy services) to detail the basic framework for this minimum evaluation scheme. These proposals have been well received at the state level, and SUDENE has decided to use the documents prepared by the consultant as the starting point for developing the new minimum evaluation system for POLONORDESTE.

3.21 Thus, on the conceptual level, much progress has been made. However, in practical terms, much remains to be done before these new systems -- be they related to monitoring or impact evaluation -- will become operational.

IV. RESULTS TO DATE--CONCLUSIONS AND LESSONS

4.01 Since 1975, nine[63/] rural development projects in Northeast Brazil have been approved by the Bank. Monitoring and evaluation was a component in each of these projects. In monetary terms, these components were expected to require more than US$11 million in base costs (on average, around 1.8% of total project base cost estimates), but these project-financed components reflect only part of the M&E effort.[64/] Substantial amounts of Bank staff time have also been devoted to this topic. Despite these efforts, results to date have been much below expectations, as described in the Bank's Interim Assessment of Rural Development Programs in Brazil's Northeast.[65/]

63/ In addition to the nine projects covered in this study, a tenth project (Second Bahia Rural Development Project) was approved in April 1983.

64/ Overhead for such activities at the federal, regional and executing agency levels are normally not included, and they may substantially surpass what is provided under the projects.

65/ Interim Assessment op. cit., para. 4.24.

> "The monitoring system of POLONORDESTE has been seen as a vehicle for providing data from the project unit and executing agencies to the regional and federal authorities, rather than as an input into the routine decision making of line management. Monitoring indicators have also been oriented toward financial and physical progress, rather than toward measurement of service delivery to an adoption of techniques by beneficiaries."

The same report also notes that there is no overall evaluation program for POLONORDESTE, and that only few of the 47 POLONORDESTE-funded projects (para 2.14) have evaluation components. This OED review confirms the above conclusions. Nevertheless, a series of lessons can be derived from these experiences, which might have wider application to other projects.

4.02 A simplified summary assessment of POLONORDESTE might be that it is over-monitored and under-evaluated. Furthermore, monitoring was initially seen as a data collection system for reporting rather than as a management tool, while evaluation was conceptualized in an overly sophisticated, academic way (longitudinal farm surveys).

4.03 Formulating M&E concepts for POLONORDESTE has been difficult. During appraisal, it was approached mostly on a project-by-project basis while, in retrospect, a programmatic approach would have been much more beneficial. In addition, no standardized concept of M&E was used at appraisal, as shown by the different definitions of monitoring and evaluation applied. Nevertheless, a methodological approach had been developed by Bank staff in the mid-seventies.[66]/ While it is true that each definition of monitoring and evaluation is debatable,[67]/ it may have been better for the Bank, within reason,[68]/ to have applied a common approach and to have learned "en route." Thus, the first lesson is that it makes sense to use a standardized methodological framework for M&E design.

4.04 While substantial effort was devoted to formulating M&E concepts and organization, insufficient actual design was done. As a result, monitoring formats and strategies had to be designed by project units during implementation, while baseline surveys were executed after the projects started rather than before. A second lesson is that detailed "engineering" of monitoring and evaluation needs to be done early in the project cycle, certainly not later than at appraisal.

66/ This methodological approach saw a chain of project events: inputs, activities, outputs, effect and impact, and defined M&E in relation to that chain.

67/ There are probably more definitions of monitoring and evaluation than textbooks on the subject.

68/ Recommending a similar methodological approach is not meant as an argument against flexibility to allow adapting to differences or changes in circumstances.

4.05 Even under different organizational arrangements, M&E remained a joint concept but at the same time an external concept and an instrument which could be counted on to provide "all" the answers. The marriage of monitoring and evaluation has been an unhappy one: monitoring became detached from management, data collection and reporting detached from implementation, and impact evaluation became almost synonymous with the expensive longitudinal farm survey. A third lesson is that the practice of combining monitoring (management information) with impact evaluation in a separate M&E unit should be abandoned. Monitoring (para. 4.08) is equal to management information, and a management information system is essential for each project, not as a separate system but integrated into the project's information flow (financial, physical, qualitative, etc.) which is needed to run and supervise the project. Evaluation is something different. Although it provides important feedback and thus facilitates lesson-learning, it operates on another level, measuring effects and impacts. There are various methods and scientific ways to go about this. Monitoring is a management art; evaluation requires expertise. Monitoring is essential in every project, but impact evaluation is probably not needed for all projects, and certainly not to the same degree.

Management Information and Monitoring

4.06 Monitoring information is not a product in and of itself; it is a tool and should be used as such. The problem, to a certain extent, is that information needs are different at various levels; an information pyramid is therefore required. Duplication in reporting, a major problem in the POLONORDESTE projects, should be avoided, and common denominator reporting systems used. Most of the POLONORDEST reports concentrated on the financial and physical aspects of the projects. These sizeable reports were not useful for management reporting which, in turn, led project units to develop their own monthly management reporting systems. On the other hand, substantial data available at the field level and/or in existing agencies were not captured by the POLONORDESTE information systems. A fourth lesson is that monitoring is not an end in itself but is needed in every project to collect available data, and to produce at the right levels information in the right quantities.

4.07 There is sometimes a feeling that management is unwilling to use monitoring data or finds that the data are not very useful. In such cases, it will not help to pressure managers to use the monitoring system. If the data provided are useful for management at a given level, they will be used; if not, they will not. In many cases, this is a reflection of monitoring having been set up as a data production system in addition to and in "isolation" of the management information system. A fifth lesson is that monitoring and management information are identical and should be dealt with as such.

4.08 Managers need to know more than financial and accounting data. They do not only need to implement a delivery function, they also need initial reactions (without implying any impact evaluation type studies) to the delivery system, eg., is it reaching the intended beneficiaries, adoption, etc. In the POLONORDESTE projects, monitoring was mostly in financial and

physical terms; in only a few cases did monitoring units undertake productivity surveys. A sixth lesson is that monitoring should not only include physical implementation and financial data but also indicators about initial reaction (adoption) of beneficiaries. These combined data feed each project's management information system.

4.09 Managers at different levels need and obtain data in different forms, but to those outside project management the quarterly report is the main product of the monitoring system. The SUDENE quarterly report format leaves much to be desired. The Bank receives hundreds of quarterly reports each trimester and must have a wealth of experience with this type of report. Furthermore, the Bank, in its supervision reports, uses standard presentations of key data and project execution summaries. A seventh lesson is that Bank experience could more effectively be used in helping projects with the initial design of their reporting formats; in any case, the initial reporting design should be completed as part of the appraisal process.[69/70/]

4.10 Multiple management levels, as already shown in the POLONORDESTE projects, tend to require different reporting formats. Needless to say, this should be avoided to the extent possible. The Bank, however, sometimes adds substantially to data generation requirements. As can be seen from para. 3.15 above, there is a very frequent presence of Bank staff[71/] in most of these projects from "normal" supervision missions, "special" supervision missions, programs missions and other Bank missions, which review, for various purposes, experience with rural development in Northeast Brazil. Each mission normally generates its own information requirements, often in addition to existing information flows and reports. While it might not be possible to reduce the frequency of these missions, given the multi-sectoral nature of these projects, missions should use existing information and not require duplication. Additional information demands might be a reflection of the inadequacy of the reporting and management information systems. Normally, the project's reporting system should generate the data required for Bank supervision. Therefore, special information requests[72/] are contrary

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69/ OMS 2.00 only requires that project monitoring and reporting requirements be reviewed during negotiations.

70/ There is another argument for finishing the outline before project implementation -- that it will free costly time at a crucial point, when managers need to concentrate on start-up.

71/ In addition, there is supervision by Brazilian authorities.

72/ For example: "The quality of monitoring and evaluation has reached a level which will enable the project administration to prepare, before a Bank mission, a concise memorandum highlighting for each component: (i) degree of progress, (ii) major problems, and (iii) nature of possible solutions. Such a note would reduce the time needed by the Bank mission to identify issues and increase the work efficiency of Bank staff on mission." (Pernambuco, SPV March 1981).

to the fostering of an effective monitoring system. There is sometimes a perception in the field, confirmed by OED findings in other cases, that quarterly reports are being filed in the Bank but not really used. This perception must not be allowed to continue. The eighth lesson is that quarterly reports should be designed to provide most of the information needed for supervision, and that supervision missions should not demand additional special reporting.

4.11 Ultimately, however, monitoring must be adapted to the actual power and control systems which run the projects. These systems are not always identical to the organigram. Familiarity with the power centers of decision-making (in the areas of budgeting allocations, funding, staffing, quality control, etc.) is essential for the successful design and implementation of the monitoring system[73]/ and ultimately for overall project success. For example, the actual flow of funds is, in reality, much more complex than the appraisal statement that the Borrowers shall make funds available in a timely way. There are indications that, not suprisingly in multi-sectorial, multi-level decision-making projects like these, the power and control systems in actual operation are different from those envisaged (or designed) at appraisal. As a result, neither SUDENE nor the UTs hold the power that the organigram seems to indicate. As a result, reporting might not reach the right decision-makers, or may provide them with the "wrong" quantity of information. The development of the SAPE/GRAFF system is a clear expression of this. The ninth lesson is that the overall decision-making structure, as it affects the project, needs to be investigated and management information geared to the right decision levels.

4.12 In the end, a summary recommendation would be to discontinue the use of the word "monitoring"; rather, "project management information reporting" or something similar could be used. It could be defined as a data collection and reporting system for management and supervision of projects covering financial, physical implementation and delivery reaction (adoption) data in sufficient detail to execute the project, report on its progress and produce the Project Completion Report.

Project Impact Evaluation

4.13 There is great variation in the methods used to evaluate the POLONORDESTE projects. (It should be remembered that only the externally financed POLONORDESTE projects normally include evaluation components.) Evaluation varies from full-fledged longitudinal farm surveys executed by outside universities (Pernambuco) to only sporadic studies (Paraiba). Mid-term evaluations were included in two projects (Rio Grande do Norte and Ceara). In another case, the Bank provided substantial additional input by making available computerized farm modeling systems and the input data used at appraisal (Pernambuco). This diversity of efforts, however, was not

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73/ For a methodological approach, see: The Design of Organizations for Rural Development Projects--A Progress Report, World Bank Staff Working Paper No. 375 dated March 1980.

intentional, and is not a reflection of a wider evaluation framework as it should have been. Almost invariably, projects are part of a wider program, and the evaluation of individual projects should be in that wider context. The tenth lesson is that evaluation of individual projects needs to be part of an overall program.

4.14 There are many approaches to evaluation. For example, there is the longitudinal farm survey aimed at determining statistically significant causal relationships. These are costly, time-consuming and logistically complex exercises. There are also sociological case studies concerned with much more in-depth analysis of a specific environment; these are not statistically significant beyond that environment. Then there are "simple" surveys, where one or two variables are measured (i.e., yields), but although sample size is small for these surveys, judicial application of survey techniques and statistical methodology is required. Each of these methods has its own uses and they are valid only when used appropriately, but they are not interchangeable. In other words, it is important that evaluation designers decide what they want. As the Bank's Handbook on Monitoring and Evaluation points out, reasonable inference rather than statistical significance might be enough in many cases. Lesson number eleven is that project designers should understand what different evaluation techniques are available and the significance of their results, and decide which is appropriate on that basis.

4.15 Project objectives may be set over-ambitiously if when designed there is no thought given to how project evaluation results will demonstrate achievement of those objectives, and whether such objectives have been reached as a result of project activities (e.g., income redistribution, urban-rural migration). Lesson number twelve requires project designers to set their objectives realistically and to clearly link the evaluation efforts to measurement 74/ of achievements in relation to these objectives.

4.16 Survey techniques using sampling, an essential element in many evaluation programs, are only valid if conducted scientifically, requiring substantial expertise. This expertise must be provided both from within the Bank and at the project level. However, substantial expertise also exists at, for example, research institutes and universities which can be tapped for both the more intricate type of survey and the case study type. Costs might be less, and the link with existing research expertise could prove to be very interesting. There is evidence that if left alone, university research can turn too academic, but proper management of evaluation programs should go a long way to mitigate against this. Furthermore, there are decided advantages in having an outsider look at impact evaluation. Lesson number thirteen is that within a well-defined evaluation program, there is an advantage to involving experienced university or other institutions in executing specific surveys or studies.

74/ Measurement does not necessarily imply statistically significant causal relationships.

4.17 Many projects also require baseline surveys to establish the pre-project benchmark against which progress can be measured.[75] Experience has shown that these surveys invariably are delayed and executed later in the project period that would be most beneficial. Lesson number fourteen is that baseline surveys are to be executed before project execution starts, or they are to be labeled differently.

4.18 Most importantly, however, is that evaluation plans are detailed at an early stage. As earlier noted, all projects included evaluation components, in different forms, but in many cases, they did not go beyond a description of what was to be undertaken. It is at this early stage that experts are needed to detail the work program and prepare the relevant cost estimates. Cost estimates are a function of the type of evaluation chosen, and in the case of surveys, sample sizes are a major determinant of survey costs. But sample size is a function of the number of characteristics to be included, their variability and the degree of precision required. It is at this stage also that links need to be established with parallel evaluation and research efforts (see also para. 5.05). Lesson number fifteen is that more detailed engineering of impact evaluation is needed during project design, and relevant expertise should be made available for that purpose during the project design and appraisal stages.

4.19 It has also become evident that in terms of evaluation, supervision expertise levels have not always been adequate. There has also been a frequently expressed desire for more direct technical assistance in this field. While the Bank cannot substitute for SUDENE or borrower-contracted consultants, its detailed advice in this matter is, nevertheless, appreciated. Lesson number sixteen is that it would be worthwhile for the Bank to provide more expertise to supervise and provide technical assistance for the implementation of impact evaluation components.[76] After all, not only the borrower, but also the Bank as a development institution could learn a great deal from well-executed evaluations.

75/ In this context it should be noted that often historical information is available in archives, files, studies etc., which provides a potentially important background data base, but this information is consulted infrequently.

76/ OPS agrees with this recommendation but qualifies that this should not come from AGRME (Monitoring and Evaluation Unit in the Bank's Agriculture and Rural Development Department). "Rather, it should be provided either by regional operational staff supported by the specialized skills of AGRME, or by consultants hired by the regions concerned. AGRME has developed a roster of consultants of known capability that is made accessible to and used by regional operational staff. The Unit also assists with the drafting of terms of reference, supervision of consultants and review of their reports. The indications are that this is a cost effective approach."

4.20 There are various types of impact evaluations, e.g., the longitudinal farm survey, the sociological case study and the simple productivity survey, each with different methodological requirements. In each case, it is important that these methodological requirements be strictly adhered to as the results will otherwise be invalid. Therefore, it is actually worse to undertake an inappropriate impact evaluation than to do none at all.

V. FUTURE PERSPECTIVE

Rural Development in Northeast Brazil

5.01 The POLONORDESTE program plays an important role in the effort to alleviate poverty in Northeast Brazil. The resources of such a program should be efficiently managed, and timely information about the degree to which project objectives are achieved should be obtained. This requires well-designed management information systems and a balanced package of impact evaluation.

5.02 As can be seen from this review, monitoring and evaluation has been hampered by many factors; actual implementation and results from these components are far below original expectations. As a result, we know very little about the impact of these activities at the target beneficiary level. However, it would be a mistake to translate these frustrations into a view that integrated rural development does not work. In fact, progress has been made albeit slowly, and the time is probably right to take a substantial step forward in a concerted effort by borrower, project and Bank officials.

5.03 In the field of management information, it is now generally accepted that the monitoring and reporting systems have been unwieldy and that more quantitative beneficiary reaction is needed. With the Bank's general knowledge on this subject and its more detailed insights on decision-making in relation to POLONORDESTE, it must now be possible to provide the necessary assistance to translate the conclusions of the Natal seminar into practice by developing a "standardized" detailed reporting format on the basis of an integrated management information system.

5.04 Further steps have been taken to develop an overall POLONORDESTE plan for impact evaluation, but this is not yet complete. Again, the Bank seems to be in the right position to help develop this idea into a concrete work program. Such a program could contain a balance of longitudinal studies in some cases, sociological cases studies in others, and simple surveys in still others. In general, it would be worthwhile to find a series of development indicators which could be easily surveyed and used as proxies for impact evaluation. Detailed work on this needs to progress further.

5.05 In this respect it is important to realize that many other types of research are normally going on which also directly or indirectly provide measures of success of the program. Some might have been completed and others might be planned or underway. It is important that links with these other activities be established in order to avoid duplication, and to integrate various findings into an overall evaluation assessment.

5.06 What is apparent from this, also, is that a strong institutional focal point is needed somewhere in the Brazilian POLONORDESTE bureaucracy to guide these efforts and to provide detailed technical assistance in impact evaluation and survey design at the field level.

5.07 In 1973 and 1974, a massive farm survey was conducted by SUDENE and the Bank as part of a research project on the agricultural economy of Northeast Brazil. With these detailed benchmark data, a current option to be investigated is whether a repeat of this survey, on a similar scale, could contribute anything to impact analysis of POLONORDESTE as a whole.

5.08 Much has been done to improve M&E in Northeast Brazil, but much more remains to be done. At present, we have reached a crossroads, and concepts now need to be translated into concrete activities. With its experience, the Bank can play an important role in achieving this.

Inside the Bank

5.09 Experience with monitoring and evaluation has also evolved within the Bank. The Agricultural and Rural Development Department has a Monitoring and Evaluation Unit (AGRME) which provides technical advice to projects and regional staff. Although AGRME has been strengthened over time, it is probably fair to say that it is understaffed in relation to the magnitude of the task it is facing, especially in relation to advice regarding impact evaluation.[77] This unit also produces case studies regarding monitoring and evaluation experience. Only one has been published to date,[78] but this is clearly meant as only the beginning of a series of technically useful Monitoring and Evaluation Case Studies Series.

77/ OPS provides the following additional clarification: "There may be some truth in this statement but, we feel that AGRME should remain small, fostering and assisting in the development/recruitment of regional expertise (as the South Asia region has done) and/or use of consultants. AGRME is fulfilling its remit to provide specialist, advisory support, training, policy guidance, and so on to regional operational staff in this particular area of their responsibilities."

78/ Monitoring Systems and Irrigation Management: An Experience from the Philippines, by Ronald Ng and Francis Lethem, March 1983.

5.10 The Bank has also published guidelines and a handbook[79] on monitoring and evaluation of agriculture and rural development projects. The problem in the Bank, as in the case of the rural development projects in Northeast Brazil, is not so much a lack of purpose or knowledge about what needs to be done, but rather a lack of cross-fertilization among Bank staff. The Monitoring and Evaluation Unit organized a week-long, half-day seminar on rural development monitoring and evaluation. That format of five half days was not particularly successful. Nevertheless, the idea of such seminars remains valid. In fact, impact evaluation techniques, especially surveys, require a high degree of expertise and statistical knowledge which are available within the Bank but only to a limited extent. It is important that project officers realize their limitations when designing or reviewing surveys, but they should also be aware of the monitoring and evaluation philosophy and experience of the Bank. It is, therefore, recommended that three-day resident seminars on monitoring and evaluation be conducted regularly for Bank staff.[80] These could replace other courses on rural development.[81]

5.11 As experience has shown, it is also important that monitoring, and especially impact evaluation, of individual projects, be understood and designed within a wider program framework. It would, therefore, be extremely useful if country evaluation profiles[82] were established, as a starting point for a more selective use of evaluation techniques.[83]

5.12 Finally it would also be useful for the Bank to increase its efforts in training project officials. Seminars such as those organized for the Northeastern Brazil rural development project in Natal and Recife, as

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79/ A Handbook on Monitoring and Evaluation of Agriculture and Rural development Projects, by D.J. Casley and D.A. Lury, November 1981.

80/ This recommendation is being followed up on by OPS.

81/ Design of Rural Development Projects Seminar, and Organization of Rural Development Projects Seminar.

82/ Such profiles could be prepared by Bank staff or expert consultants. It would be extremely, useful if they would not only cover Bank related evaluation, but make an attempt to review evaluation effort country wide (or by major region).

83/ Already included in the AGRME work program.

well as other regional seminars,[84]/ have proven to be useful and should probably figure more frequently in the Monitoring and Evaluation Unit's work program.[85]/

5.13 Regional staff and OPS agree with the conclusions and recommendations of this report. Country profiles (para. 5.11) and regional seminars (para. 5.12) are already included in AGRME's work program, and follow up is planned in relation to the suggested resident M&E seminar (para. 5.10). While OPS agree that more M&E expertise needs to be provided, at present they do not share the conclusion that this should be done through strengthening AGRME (paras. 4.19 and 5.09).

84/ For example, a workshop on Monitoring and Evaluation for French-speaking project officials was organized in Cameroon in March 1983. See: Report on the Regional Workshop on Monitoring and Evaluation of Rural Development Projects in Western Africa, by D. Antelin and J. F. Barres, March 1983.

85/ Already included in the AGRME work program.

ANNEX 1

BUILT-IN PROJECT MONITORING AND EVALUATION:
RURAL DEVELOPMENT IN NORTHEAST BRAZIL

KEY DATA AND STATISTICS 1/

1/ End FY82 is the cut-off date for purposes of analysis in this report. The Second Bahia Rural Development Project (Loan 2269-BR for US$67.8 million) was approved on April 26, 1983. For ease of reference, data on Bahia II have been added to the statistics in this Annex.

BUILT-IN PROJECT MONITORING AND EVALUATION:
RURAL DEVELOPMENT IN NORTHEAST BRAZIL

Overview of Projects Reviewed

Rio Grande do Norte Rural Development Project
(Loan 1195, US$12.0 million)

Approval Date: 12/11/75 Effectiveness Date: 07/30/76
Agreement Date: 03/01/76 Closing Date: 09/30/82/a
President's Report: P-1704-BR (11/13/75)
SAR: 921-BR (11/11/75)

Ceara Rural Development Project - Ibiapaba
(Loan 1488, US$17.0 million)

Approval Date: 09/13/77 Effectiveness Date: 03/28/78
Agreement Date: 11/17/77 Closing Date: 12/31/82/b
President's Report: P-2110-BR (08/30/77)
SAR: 1580a-BR (08/22/77)

Paraiba Rural Development Project - Brejo
(Loan 1537, US$24.0 million)

Approval Date: 03/28/78 Effectiveness Date: 10/19/78
Agreement Date: 05/08/78 Closing Date: 09/30/83/c
President's Report: P-2207-BR (03/15/78)
SAR: 1814-BR (03/10/78)

Bahia Rural Development Project - Paraguacu
(Loan 1589, US$37.0 million)

Approval Date: 06/06/78 Effectiveness Date: 12/05/78
Agreement Date: 07/19/78 Closing Date: 12/31/83/d
President's Report: P-2297-BR (05/24/78)
SAR: 2009a-BR (05/19/79)

/a Extended to 09/30/84.
/b Extended to 12/31/85.
/c Extended to 09/30/84.
/d Extended to 12/31/85.

Sergipe Rural Development Project - Tabuleiros Sul
(Loan 1714, US$26.0 million)

Approval Date: 05/31/79 Effectiveness Date: 02/05/80
Agreement Date: 06/20/79 Closing Date: 09/30/84
President's Report: P-2554-BR (05/16/79)
SAR: 2358-BR (05/22/79)

Pernambuco Rural Development Project - Agreste Setentrional
(Loan 1728, US$40.0 million)

Approval Date: 06/14/79 Effectiveness Date: 02/05/80
Agreement Date: 06/20/79 Closing Date: 12/31/84
President's Report: P-2578-BR (06/04/79)
SAR: 2418-BR (05/22/79)

Ceara Rural Development Project (Phase II)
(Loan 1924, US$56.0 million)

Approval Date: 12/02/80 Effectiveness Date: 07/07/81
Agreement Date: 01/14/81 Closing Date: 12/31/85
President's Report: P-2898-BR (11/11/80)
SAR: 3020a-BR (11/11/80)

Piaui Rural Development Project
(Loan 2015-BR, US$29.0 million)

Approval Date: 06/16/81 Effectiveness Date: 02/05/82
Agreement Date: 08/10/81 Closing Date: 12/31/86
President's Report: P-3078-BR (05/28/81)
SAR: 3398-BR (05/22/81)

Maranhao Rural Development Project
(Loan 2177-BR, US$42.7 million)

Approval Date: 06/10/82 Effectiveness Date: 05/10/83
Agreement Date: 06/25/82 Closing Date: 12/31/87
President's Report: 3327-BR (05/12/82)
SAR: 3845a-BR (05/21/82)

Second Bahia Rural Development Project - Nordeste
(Loan 2269-BR, US$67.8 million)

Approval Date: 04/26/83 Effectiveness Date: 07/20/83
Agreement date: 05/23/83 Closing Date: 12/31/88
President's Report: P-3511-BR (04/04/83)
SAR: 42496-BR (04/01/83)

ANNEX 1
Table 2

BUILT-IN PROJECT MONITORING AND EVALUATION:
RURAL DEVELOPMENT IN NORTHEAST BRAZIL

Key Dates /a

	Project Name	Key Dates			
		Approval	Signing	Effectiveness	Closing
1.	Rio Grande do Norte	12/11/75	03/01/76	07/30/76	09/30/84/b
2.	Ceara I	09/13/77	11/17/77	03/28/78	12/31/85/b
3.	Paraiba	03/28/78	05/08/78	10/19/78	09/30/84/b
4.	Bahia	06/06/78	07/19/78	12/05/78	12/31/85/b
5.	Sergipe	05/31/79	06/20/79	02/05/80	09/30/84
6.	Pernambuco	06/14/79	06/20/79	02/05/80	12/31/84
7.	Ceara II	12/02/80	01/14/81	07/07/81	12/31/85
8.	Piaui	06/16/81	08/10/81	02/05/82	12/31/86
9.	Maranhao	06/10/82	06/25/82	05/10/83	12/31/87
10.	Bahia II	04/26/83	05/23/83	07/20/83	12/31/88

/a Reviewed before final printing on the basis of Statement of Loans dated January 31, 1984.

/b Original closing dates extended to these new dates.

ANNEX 1
Table 3

BUILT IN PROJECT MONITORING AND EVALUATION:
RURAL DEVELOPMENT IN NORTHEAST BRAZIL

Project Costs and Bank Funding /a

	Project Name	Project Costs	Bank Loan	Complementary Costs /b
			US$ million	
1.	Rio Grande do Norte	30.00	12.00	-
2.	Ceara I	55.75	17.00	-
3.	Paraiba	67.30	24.00	-
4.	Bahia	106.62	37.00	-
5.	Sergipe	76.02	26.00	n.a. /c
6.	Pernambuco	116.69	40.00	-
7.	Ceara II	163.19	56.00	72.0 /d
8.	Piaui	84.40	29.00	23.0 /e
9.	Maranhao	122.90	42.70	69.0 /f
	TOTAL	822.87	283.70	
10.	Bahia II	173.63	67.80	n.a./g
	TOTAL	996.50	351.50	

/a As per appraisal estimates.

/b Complementary activities are defined as activities which would support the project but which would be financed separately and without Bank participation. These became especially important when the Bank decided in 1981 to no longer finance smallholder credit because of the subsidies involved.

/c Not available, but appraisal report mentions the following activities planned parallel to the project: cooperative societies development; input supply and mechanization services and storage.

/d These include: credit; input supply and mechanization services; agro-industrial development; and improved State coordination of special rural development programs (SAR, paras. 4.40-4.47 and 5.03).

/e Agricultural and fisheries credit. In addition to these calculated costs Government would also finance essential complementary items such as teacher salaries and additional roads (SAR, para. 5.02).

/f Agricultural, small rural industry, and fisheries credit. In addition to these calculated additional amounts Government would also finance essential complementary items including construction of additional roads and road maintenance costs, teachers and health service staff salaries, and compensation for improvements on land to be recovered from previous irregular occupants (SAR, paras. 3.44-3.46 and 4.02).

/g Not available, but appraisal report mentions the following activities complementary to the project: minimum price financing scheme and amerindian assistance. (SAR, paras. 3.47-3.48).

BUILT-IN PROJECT MONITORING AND EVALUATION:
RURAL DEVELOPMENT IN NORTHEAST BRAZIL

Disbursements (As of November 30, 1983)

	Project Name	Loan Number	Date of Signing	Loan Amount	--06/30/82-- Amount Disbursed	Principal Repaid	--------01/31/84------ Amount Disbursed	Principal Repaid
				US$ million				
1.	Rio Grande do Norte	1195-BR	03/76	12.00	5.08	0.37	7.76	0.95
2.	Ceara I	1488-BR	11/77	17.00/a	5.46	2.13	7.21	3.95
3.	Paraiba	1537-BR	05/78	24.00	4.85	2.00	7.49	5.00
4.	Bahia	1589-BR	07/78	37.00	9.08	1.54	15.38	6.16
5.	Sergipe	1714-BR	06/79	26.00	2.61	-	6.72	2.17
6.	Pernambuco	1728-BR	06/79	40.00	5.22	-	12.51	3.33
7.	Ceara II/b	1924-BR	01/81	56.00	3.51	-	18.33	-
8.	Piaui /b	2015-BR	08/81	29.00	2.00	-	6.32	-
9.	Maranhao/b	2177-BR	06/82	42.70	-	-	4.67	-
	TOTAL			283.70	37.81	6.04	86.39	21.56
10.	Bahia II/b	2269-BR	05/83	67.80	- /c	- /c	5.44	-

/a But US$6.00 million recently cancelled.
/b Pooled loans.
/c Became effective only on May 10, 1983.

ANNEX 1
Table 5

BUILT-IN PROJECT MONITORING AND EVALUATION:
RURAL DEVELOPMENT IN NORTHEAST BRAZIL

Direct Beneficiaries (As targeted in project design)

	Project Name	Farmers	Small Non-Farm Enterprises
1.	Rio Grande do Norte	15,000 /a	-
2.	Ceara I	5,800	-
3.	Paraiba	7,400	450/b
4.	Bahia	17,000 /c	-
5.	Sergipe	8,400	-
6.	Pernambuco	15,540	2,700
7.	Ceara II	60,000	1,100
8.	Piaui	11,300 /d	-
9.	Maranhao	24,000 /e	650
	TOTAL	164,440	4,900
10.	Bahia II	45,000	-
	TOTAL	209,440	4,900

/a Form 590 project description indicates 16,000.
/b Form 590 project description indicates 1,200.
/c Includes 675 small- and medium-size (50-200 ha) livestock operations.
/d Includes 1,800 fishermen.
/e Of which 4,500 at a low extension density level; more secure land tenure would be provided to 39,000 small farmers, in itself an important step towards providing the incentive to make more productivity on-farm improvements.

ANNEX 1
Table 6

BUILT-IN PROJECT MONITORING AND EVALUATION:
RURAL DEVELOPMENT IN NORTHEAST BRAZIL

Cost of M&E Components

Project Name	M&E Costs (basecosts) Cruzeiros	US$	% of Total baseline Costs
	millions		
1. Rio Grande do Norte	5.7	0.8 /a	3.7%
2. Ceara I	6.22	0.52 /b	1.2%
3. Paraiba	11.7	0.78 /c	1.5%
4. Bahia	18.2	1.20 /d	1.5%
5. Sergipe	n.a.	0.73 /e	1.2%
6. Pernambuco	n.a.	1.58 /f	1.8%
7. Ceara II	n.a.	2.43 /g	2.3% /d
8. Piaui	62.7	1.12 /h	1.8%
9. Maranhao	n.a.	2.27 /i	2.4%
		11.43	

/a Monitoring and Evaluation components costs (SAR, page 16).
/b Monitoring and Evaluation components costs (SAR, Annex 4, Table 1).
/c Monitoring and Evaluation costs (SAR, Annex 12, Table 2).
/d Supplementary Staff Working Paper No. 13, Table 5.
/e Costs for evaluation and studies and 25% of administration and monitoring costs (SAR, page 24).
/f Costs of Evaluation and 25% of Administration and Monitoring costs (SAR, page 27).
/g No details available; 8 out of 64 technicians responsible for monitoring and evaluation; plus studies and consultants; 25% of Coordination Management and studies components (SAR, page 29).
/h Costs of evaluation contracts (Cr 24 million) and one-third of remaining project administration costs (SAR, Annex 3, Table 12).
/i Full evaluation costs and 25% of project management and monitoring costs (SAR, page 30, Appraisal Report).

BUILT-IN PROJECT MONITORING AND EVALUATION:
RURAL DEVELOPMENT IN NORTHEAST BRAZIL

Project Descriptions [1/]

1. Rio Grande do Norte Rural Development Project. The project seeks improvements in agricultural productivity/incomes of some 16,000 small-farmer families in a marginal rainfall area. The two-phase project features technical package and delivery system experimentation and improvements to the extension service, and components to increase farmer access to credit, health and agricultural inputs. Phase I involved 20% of the project area over a three-year period with emphasis on experimentation. Phase II is expanding Phase I's results with the introduction of four new components (inland fisheries/small reservoirs, marketing, seed production and land titling). The project closing date has been extended by two years.

2. Ceara Rural Development Project - Ibiapaba. Project in the highland area in the Northeastern Brazil State of Ceara to provide credit and extension to some 5,800 small-scale farmers; land purchase credit to 450 farmers; field experiments; crop support for cooperatives; mechanization services; construction or upgrading of 370 km of feeder roads; rural electrification for 5,000 customers; health facilities to serve 25,000 people; village water supply; construction of eight community centers and 50 schools; teachers' training and provision of non-formal education; and project administration and studies.

3. Paraiba Rural Development Project. The project is aimed at im-proving the productivity and living conditions of about 7,400 small farmers and 1,200 small-scale non-farm enterprises. It features the improvement of production services and infrastructure such as agricultural and off-farm (social) extension, training, adaptive research and farm trials, marketing and storage, credit, feeder roads, a range of social infrastructure, and strengthened project administration.

4. Bahia Rural Development Project - Paraguacu. Development of 17,000 small farmers in the Paraguacu River Basin. Provision of on-farm credit, expansion and strengthening of support services (extension, research, seed production, input supply, mechanization, storage, marketing, assistance to cooperatives and land titling); land purchase credit to 820 small-scale operators (owners and non-owners); infrastructure development (1,140 km of roads, small irrigation schemes, multi-purpose dams, 70 water supply systems, 50 health posts, 27 health centers, and 100 primary schools); and project administration, monitoring and evaluation.

1/ Generally obtained from summary project description as contained in the most recent supervision report.

5. Sergipe Rural Development Project. The project is designed to increase agricultural production and incomes to broaden economic opportunities and thus raise the living standards of 8,400 families residing in the Tabuleiros Sul region of Sergipe. Other objectives of the project include: increasing the project area's contribution to local and state food supply and export earnings; and improving the technical and administrative agencies involved in agricultural and rural development.

6. Pernambuco Rural Development Project. The project includes: (a) agricultural credit for crops and livestock development on 15,540 small farms; (b) production support services such as extension, research, seed supplies, water conservation and assistance for cooperative and marketing development; (c) support for small non-farm enterprises; (d) social infrastructure for village water supply, health and education; and (e) arrangements for project administration, monitoring and evaluation and several complementary studies of the project area.

7. Ceara Second Rural Development Project. Statewide project to provide rural extension to some 60,000 small farmers, legalization of land tenure to some 6,550 farmers, colonization of 3,700 families, development of 12 cooperative societies, education facilities and training of 78,000 students, health and sanitation facilities to serve directly about 400,000 people, improvement of 2,200 km of feeder and access roads, technical assistance for the construction of 83 small-scale irrigation schemes, technical assistance to 1,100 small-scale non-agricultural enterprises and project coordination, management and studies.

8. Piaui Rural Development Project. The project aims at improving productivity, incomes and living conditions for 9,500 small farmers and 1,800 fishermen. It features a variety of measures for land tenure improvement, including a land redistribution program; the promotion of agricultural development through adaptive research, extension, seed production, marketing, and small-scale irrigation; improvements in rural roads, water supply and education; coastal fisheries development; and strengthened project administration.

9. Maranhao Rural Development Project. Rural development in 47 Northern municipalities in the State of Maranhao including: (a) cadastral survey of 3.4 million ha, regularization of 2.2 million ha and demarcation of 1.0 million ha; (b) extension services to 24,000 small farmers, research, seed production, marketing, input supply and cooperative development; (c) support for small-scale industries and inland fisheries; (d) creation of a total 100,000 ha in forest reserves; (e) construction of 510 km of new access roads, and improvement of 640 km; (f) health and education services; and (g) administration, monitoring and evaluation.

10. Second Bahia Rural Development Project - Nordeste.2/ The project aims at improving incomes and living standards of 45,000 small (less than 50-ha holdings) farm families in 43 municipalities in the Northeast of Bahia by

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2/ Adapted from appraisal report rather than supervision report.

(i) land tenure activities; (ii) strengthening rural extension and research; (iii) improvement of 1,000 km of municipal roads; (iv) improvement of primary education and health care; (v) construction of 100 rural water supply systems; and (vi) project management and coordination including monitoring and evaluation.

BUILT-IN PROJECT MONITORING AND EVALUATION:
RURAL DEVELOPMENT IN NORTHEAST BRAZIL

Monitoring and Evaluation Design [1]/

RIO GRANDE DO NORTE RURAL DEVELOPMENT PROJECT

"4.20 ... a separate unit would monitor and evaluate the project (Annex 8) ....

5.03 A separate monitoring group, staffed by at least two full-time professionals experienced in research in social or economic fields, would be established within the Project Unit. The monitoring group would work closely with the project unit but would not have specific implementing responsibility. It would be assisted by consultants in work design, data processing, analysis and interpretation."

CEARA RURAL DEVELOPMENT PROJECT - IBIAPABA

"Reporting, Monitoring and Evaluation

6.07 Based on the targets outlined in the respective yearly operating plans, each executing agency will prepare quarterly progress reports. The project manager will compile these reports and submit them to the regional POLONORDESTE[2]/ commission for review. These reports would also be provided to the Bank. In addition to these periodic reporting arrangements, handled by the state POLONORDESTE technical unit, CEPA-CE[3]/ will maintain a special monitoring and evaluation unit which will focus particularly on evaluating the impact of various project components in the project area and the performance of the participating agencies, and on helping identify modifications which might need to be introduced in the project. The monitoring group, which would be staffed with several full-time professionals with social and economic research experience and a small administrative support staff, would work closely with the project management team, although it would not have direct project administration or coordination responsibilities. The monitoring and evaluating unit would be assisted by consultants as necessary in work design, data-processing, analysis and interpretation. The monitoring and evaluation effort takes on additional importance in view of: (i) the state's intention to use experiences from the Ibiapaba project in helping guide formulation and execution of POLONORDESTE

1/ Source: the various appraisal reports (main text only), appraisal reports are listed in Annex 1, Table 1.

2/ Development Program for Integrated Areas in the Northeast.

3/ State Agriculture Planning Commission.

projects in other parts of Ceara; and (ii) the desirability of being able to identify quickly (and adjust the project to take account of or offset) any unexpected side effects of the project, as the project will stimulate significant changes in the project area economy."

PARAIBA RURAL DEVELOPMENT PROJECT - BREJO

"Monitoring and Evaluation

6.03 The Project would have a management information system built into the project management structure, including a progress reporting system for each of the executing agencies. Quarterly reports to UCT[4]/ would form the basis of a quarterly review by UCT monitoring staff and technical advisers, who would bring to the attention of the Management Council and the implementing agencies any problems or shortfalls needing corrective action. Copies of the review, with comments of Management Council and action needed/taken, would be forwarded to POLONORDESTE[5]/ and the Bank, within three months after each quarter. Assurances to this effect were obtained from the Government during negotiations.

6.04 Evaluation of the project effects and impact would be handled by the special unit of CEPA[6]/ which will report to the Management Council through the Chief Program Coordinator. The unit would have responsibility for the following: completing the baseline socio-economic survey; farm and social surveys on the output and effects of the project especially of the target groups; studies of particular issues and problems; and mid-term and ex-post evaluation of the project's design and impact. Information and data obtained through the socio-economic survey undertaken during project preparation would serve as benchmarks for measuring project impact. In designing the monitoring and evaluation system, efforts have been made to define the objectives of each project component and to identify key indicators to measure project progress and impact. These are shown in Annex 10, Charts 1 to 3."

BAHIA RURAL DEVELOPMENT PROJECT - PARAGUACU

"6.05 PMU[7]/ Monitoring/Planning Staff. The section of the Project Management Unit dealing with monitoring, long-term planning and special studies would be headed by a monitoring and planning coordinator. The section would include initially three technical specialists (including the coordinator), five student interns, and administrative auxiliaries; other

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4/ Unidade de Coordenacao Technica - the project coordinating unit.

5/ Development Program for Integrated Areas in the Northeast.

6/ State Agricultural Planning Commission.

7/ Project Management Unit.

technical staff could later be transferred from the operations group. The monitoring sub-group would have two main tasks. First, it would monitor the output or results of each component and advise the project executive coordinator of short-falls in project achievements relative to expectations, particularly by comparing achievements to itemized objectives and indicators by component (see Annex 7). Standardized monitoring forms would be completed quarterly by executing agencies and forwarded to the monitoring group for synthesis into quarterly project reports that would be forwarded to project management, the State POLONORDESTE Management Council, Regional and Federal POLONORDESTE officials and the Bank. The monitoring forms would be pre-coded for computer processing to accelerate and broaden access to project data. Once operating, monitoring by the project management unit would be chiefly a repetitive task of ensuring that quarterly reports were received from executing agencies and of processing and analyzing returns. Agreement was reached during negotiations that: (i) the project management unit would contract a consultant data analyst, under terms and conditions satisfactory to the Bank, to help stan-dardize data requirements among participating agencies and establish coding and analysis procedures (with a view to extending monitoring formats, analysis and data retrieval to other POLONORDESTE projects) and provide a report on the recommended procedures to the Bank for review and comment prior to their implementation; and (ii) the quarterly project reports would be provided to the Bank promptly upon their completion.

6.06 The second main task of the monitoring sub-group would be to organize, administer, process, and initially analyze an annual farm productivity survey. The handling of this survey by the PMU rather than the evaluation group (para. 6.13) should help isolate repetitive data collection and processing from the more qualitative and reflective approach required in evaluation. In addition, the farm survey operation should have a positive influence on project implementation by enhancing the PMU staff's awareness of realities in the project area, especially among the small farmer target groups, and of development issues in general. Project technical specialist staff (and student interns) would be involved in survey data collection for about three weeks annually. This involvement would ensure their intensive contact with project beneficiaries, an experience few might otherwise gain. The contact would provide direct feedback between beneficiary and planner and, hopefully, a better sense of the potential uses as well as shortcomings of the survey-derived data. It is envisaged that the farm survey would comprise a small sample (probably less than 700) of participant and non-participant farmers in the project area. It would be conducted with a fixed format, pre-coded questionnaire centered on production technology, farm inputs, institutional contact and support, and produce marketing. If greatest possible value is to be derived from the survey program as a management tool and as a basis for evaluation and planning, the first year the survey will surely be the most critical: the questionnaire would need to be created, tested, and pre-coded; farmers approached, their cooperation sought and the sample selected; enumerators trained; and, the first year's survey conducted, processed and analyzed. The PMU would require initial assistance in this work. It was therefore during negotiations that the PMU would contract consultants on terms and conditions satisfactory to the Bank

to assist in survey preparation and to establish data processing and analysis procedures, the recommended survey design and analysis procedures to be communicated to the Bank, for review and comment prior to implementation. The consultant's terms of reference would specifically stress that data collection should be tailored to data analysis capacity and that reports should be prepared in a short enough time to be of full operational use to the PMU.

Evaluation

6.13 Although directly or indirectly, all of the staff working on different aspects of the project would need to be involved in evaluating project impact and effectiveness, overall responsibility for project evaluation would lie with an evaluation group separate from the rest of the PMU, but funded by the project and located in the Secretariat of Agriculture (possibly within CEPA-BA).[8/] It would be directly responsible to the Management Council and would carry out on-going and post facto evaluation of the project. Staff of the evaluation group would comprise two professionals (one of whom would be a social scientist) and administrative support. The group would have an orientation toward the sociological, as well as economic, aspects of rural development to help focus evaluation on the intended key project beneficiaries.

6.14 On-going evaluation would complement the monitoring activities of the PMU and would require close collaboration between the evaluation group and the rest of the PMU in the planning of work programs and sharing of information and ideas. It would involve a continuous advising of project management of the extent and quality of project progress and a rapid isolating of present or potential implementation difficulties. On-going evaluation "products" would comprise reports of topic-specific evaluation studies (see below), evaluations of PMU monitoring and farm survey results, and a major mid-project evaluation report (during project year 3). On-going evaluation studies would be conducted primarily by consultants on a study-by-study basis but consideration would be given to the possibility of the long-term involvement of a Brazilian university graduate program in evaluation studies. Studies would be qualitative as much as quantitative, covering topics suggested by the evaluation group, project management, executing agencies, the Management Council, POLONORDESTE officials or the Bank. The studies would provide an independent examination of possible difficulties in project implementation and would be a source of suggestions for remedial action, adaptation or expansion. They would focus on the quality of project interventions, and the extent to which project objectives are achieved and to which the various segments of the target population are benefitted. Specific evaluation studies could include:

(a) evaluations of the effectiveness of particular executing agencies or development strategies (e.g., credit delivery, land titling, off-farm storage and marketing activities, use of informal producer

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8/ State Agricultural Planning Commission.

groups as extension "contact groups", participation of small-scale farmers in cooperatives) and the productivity and income changes resulting from the project;

(b) participant evaluation of project activities -- comparisons of the expectations of participants (beneficiaries and executing agencies) to actual project intentions and attainments; and

(c) intensive sociological studies of a small number of participant and non-participant communities, to serve as counterpart to the farm survey in establishing a data base for project evaluation.

The evaluation group would contract a consultant, on terms and conditions satisfactory to the Bank, to assist in establishing the project evaluation strategy and work program. Agreement was reached during negotiations that the detailed evaluation plans would be provided to the Bank by December 31, 1978 for comment.

6.15 The evaluation group would also prepare a post facto project evaluation report to serve partly as a project completion report. It is expected that both the on-going and post facto evaluations would provide the state with an important input in the formulation of future rural development projects. Agreement was reached during negotiations that the project completion and post facto evaluation report would be provided to the Bank within six months of project completion and that the report would include information on the execution and initial operation of the project, including costs and estimates of the effects and impact of the project, as well as information on the performance of all involved parties."

SERGIPE RURAL DEVELOPMENT PROJECT - TABULEIROS SUL

"6.02 An Administration Technical Unit for POLONORDESTE projects was established in 1977 within SUDAP[9]/ which would be in charge of the[10]/ for the Tabuleiros Sul Project. The PAU would have two sections, one responsible for field operations and the other for monitoring....

6.04 Monitoring/planning staff would deal with monitoring, long-term planning and special studies under the direction of a monitoring and planning coordinator. The section would include, initially, two technical specialists (including the coordinator), two student interns, and administrative auxiliaries. The unit would have two main tasks. Firstly, staff would monitor the results of each component and advise the project executive coordinator of shortfalls in project achievements relative to expectations. Standardized forms would be completed quarterly by executing agencies and forwarded to project management, the State POLONORDESTE Management Council, Regional and Federal POLONORDESTE officials and the Bank. Assurances were received during

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9/ Superintendency for Agricultural Production.

10/ Project Administration Unit.

negotiations that: (a) the Project Administration Unit would standardize data requirements among participating agencies and establish coding and analysis procedures and provide a report on the recommended procedures to the Bank for review and comment prior to their implementation; and (b) the quarterly project reports would be provided to the Bank promptly upon their completion.

6.05 The second main task of the monitoring sub-unit would be to organize, administer, process, and analyze in the first, third and fifth project years, a farm productivity survey. The farm survey would cover a small sample (probably less than 350) of participant and non-participant farmers in the project area. It would be conducted with a fixed format, pre-coded questionnaire centered on production technology, farm inputs, institutional contact and support, and produce marketing. The PAU would require initial assistance in this work. Therefore, assurances were received during negotiations that the PAU would contract consultants on terms and conditions satisfactory to the Bank to assist in survey preparation and to establish data processing and analysis procedures, the recommended survey design and analysis procedures to be communicated to the Bank, for review and comment prior to implementation.

Project Evaluation

6.09 Overall responsibility for project evaluation would lie with an evaluation unit separate from the PAU, but funded by the project and located in CEPA-SE. This unit would be established by November 30, 1979. It would be directly responsible to the Management Council and would carry out on-going and post facto evaluation of the project. Staff of the evaluation group would comprise one professional and administrative support, assisted by consultants where necessary. Evaluation would complement the monitoring activities of the PAU and would involve a continuous advising of project management of the extent and quality of project progress and implementation difficulties. On-going evaluation 'products' would comprise reports of topic-specific evaluation studies, evaluations of PAU monitoring and farm survey results, and a major mid-project evaluation report (during project year 3). The evaluation team would also prepare a post facto evaluation report on the project to serve partly as a project completion report. Assurances were received during negotiations that the project completion report would be provided to the Bank within six months of project completion, and that the evaluation team would be maintained after project completion and until its functions are assumed by SUDAP.

6.10 Because the project evaluation strategy and work program are not yet fully defined, the evaluation team would contract a consultant, on terms and conditions satisfactory to the Bank, to assist in establishing the project detailed evaluation strategy and work program. Assurances that the consultant would be hired and the Bank would be provided with the draft terms of reference for this consultant's review were received from the state during negotiations. Assurances were also received during negotiations that the detailed evaluation plans would be provided to the Bank for comment by December 31, 1979."

PERNAMBUCO RURAL DEVELOPMENT PROJECT - AGRESTE SETENTRIONAL

"Project Monitoring

6.06 The project monitoring unit would comprise one assistance project manager and two assistants, one for all production support components and one for all social components. The PMU would be responsible for preparing quarterly monitoring reports and assisting the evaluation team in data gathering. The basic information for monitoring would be provided by the executing agencies, mainly through their monitoring or statistical departments, and the technical assistants of the PMU. To ensure timely data collection, PMU would prepare standard forms compatible with the administrative systems of the executing agencies, establishing additional administrative mechanisms when required. The monitoring data would be distributed to the members of the POLONORDESTE Management Council, the Evaluation Team, the regional coordinator and the executing agencies. After receipt of possible comments the PMU would feed the relevant monitoring information back to the regional and local levels during ensuring field visits. The quarterly monitoring report would point out shortfalls in project achievements relative to expectations, by comparing actual performance to targets of the same date by itemized indicators. Assurances were obtained during negotiations from Government that quarterly monitoring reports would be provided to the Bank when available. The monitoring staff of the PMU would cooperate with the evaluation team in preparing yearly surveys, comparing achievements to the initial situation by itemized objectives and key indicators (Annex 7). The monitoring team would take the lead within the PMU in preparing the Project Completion Report. Assurances were also obtained from Government that this report would be prepared and submitted to the Bank within six months after final disbursement.

Project Evaluation

6.07 The evaluation of project impact and results would be executed by an independent entity -- the Integrated Master's Program of Economics and Social Studies of the UFPE -- which would report directly to the POLONRDESTE Management Council. The evaluation exercise would consist of baseline studies, on-going evaluation of project implementation and a post project evaluation. The baseline studies would provide the UFPe and management with a point of reference for evaluating project impact. The pre-project situation would be established by three studies concerning: (a) the present health situation, (b) the present situation in education and (c) the actual level of income of small farmers and employment, in the project area. The annual evaluation, using monitoring data and spot-checks as required, would call the attention of management to existing development trends in the project area and make proposals for project adjustment where appropriate. The evaluation exercise would be an in-depth analysis of project-motivated developments, trying to identify the less visible factors that shape them and to anticipate future developments in order to enable management to respond adequately to up-coming demands in the project area. The post project evaluation exercise would describe final project impact and assist project

management in preparing the Completion Report. Assurances were obtained at negotiations from State Government that: (a) the baseline studies would be carried out under terms and conditions acceptable to the Bank; (b) the Bank would be provided with a definitive evaluation program, before December 31, 1979; (c) that the evaluation reports would be submitted to the Bank for comment, when they become available; and from the Government that a post-project evaluation report would be prepared and submitted to the Bank within eight months after the final disbursement."

CEARA RURAL DEVELOPMENT PROJECT (PHASE II)

"6.05 The monitoring, evaluation and studies section would, at full development, include 8 technical specialists supplemented by temporary student interns. This section would have three main tasks. Firstly, staff would monitor the results of each component and advise the project executive coordinator of achievements as well as short-falls relative to expectations. Standardized forms would be completed quarterly by executing agencies and forwarded to the monitoring group for synthesis into quarterly project reports that would be distributed to the PCMU[11]/ management and operational staff, the State Rural Development Council, Regional and Federal officials and the Bank. Assurances were received during negotiations that: (a) the PCMU would standardize data requirements among participating agencies, establish coding and analysis procedures and provide a report on the recommended procedures to the Bank for review and comment prior to their implementation, but not later than April 1, 1981; and (b) the quarterly project reports would be provided to the Bank promptly upon their completion. The monitoring staff would also organize, administer, process, and analyze in the first, third and fifth project year, a farm productivity survey. The farm survey would cover a small sample of participant and non-participant farmers in the state. It would be conducted with a fixed format, pre-coded questionnaire centered on production technology, farm inputs, institutional contact and support, and produce marketing. The PCMU would require assistance from consultants in initiating this work. During negotiations, assurances were received that the recommended survey design and analysis procedures would be communicated to the Bank, for review and comment prior to implementation but no later than April 1, 1981.

6.06 The second main task of the monitoring, evaluation and studies unit would be project evaluation, which would complement and draw on project monitoring results and would involve a continuous advising of project management of the extent and quality of project progress and implementation difficulties. On-going evaluation 'products' would comprise reports of topic-specific evaluation studies, evaluations of PCMU monitoring and farm survey results, and a major mid-project evaluation report (during project year 3). The evaluation team would also prepare and contract uninvolved third-party institutions for a post-facto evaluation report of the project to supplement the project completion report. Assurances were received during negotiations

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11/ Project Coordination and Management Unit.

that the project mid-term evaluation report, and the project completion report, would be provided to the Bank, the former not later than June 30, 1983, and the latter within six months of project completion.

6.07 The third main task of this section of the PCMU would be to plan, contract and interpret technical and social studies relevant to project implementation, and to resolve unforeseen bottlenecks. To fulfill these functions, the group will also establish a project data bank and keep track of completed and ongoing research of potential value to rural development project implementation in the state. The main studies already defined, to be carried during the first years of the project, are: soil conservation, state water balance (especially ground water potential of arid and semi-arid areas), and sociological studies meant to help guide project implementation. Assurances were received during negotiations that the detailed terms of reference of these studies would be approved by the Bank, and that these reports should be provided to the Bank, within three months of their completion."

PIAUI RURAL DEVELOPMENT PROJECT

"Monitoring

6.05 The project monitoring system, to be managed by the Planning, Monitoring, and Evaluation Sub-Unit within the PMU, would produce the information required by management for decision-making and annual planning (para. 6.04). The basic information for monitoring would be provided by PMU staff, the executing agencies, and project beneficiaries. The five technical sub-coordinators and the three regional field coordinators would continuously monitor implementation progress for each component and advise the Project Coordinator on achievement as well as shortfalls in project execution. Standardized forms would be completed quarterly by the executing agencies, forwarded to the PMU, checked with other available information, and consolidated into quarterly project reports. These reports would be distributed to PMU and TU[12]/ management and project staff, the executing agencies, the POLONORDESTE State Management Council, and Regional and Federal officials. The reports would give details on project implementation progress and expenditures, including comparisons of actual performance with targets, estimated costs, and key indicators. In addition, information on a limited number of key indicators would be collected monthly from a very small sample of beneficiaries in order to quantitatively assess beneficiary response to project services and recommendations. Assurances were obtained during negotiations that: (a) The PMU would complete ongoing work with the executing agencies on standardized information requirements and reporting formats; establish data analysis procedures; and provide a report outlining these procedures to the Bank for review prior to their implementation, but no later than October 1, 1981; and (b) the quarterly monitoring reports would be

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12/ Technical Unit - the project coordinating unit.

provided to the Bank promptly upon their completion, but no later than three months after the close of each POLONORDESTE fiscal quarter (Annex 10).

Evaluation

6.06 To complement monitoring activities, evaluation would aim to provide project management and the State with the necessary information to adequately plan project activities and to adjust, when necessary, project strategy and land and rural development policies. Evaluation would be comprised of the following activities: (a) ongoing evaluation; (b) a mid-term evaluation; and (c) a post-project evaluation. Ongoing evaluation, carried out by the Planning, Monitoring, and Evaluation Sub-Unit in the PMU, would consist of short-term studies of specific project activities and implementation problems. These studies would complement monitoring information and would be useful for project management and annual planning. An in-depth mid-term evaluation would be conducted during the third year to provide project management with information on emerging development trends within the project area and preliminary assessments of project impact both on beneficiaries and non-beneficiaries. Although the PMU's Planning, Monitoring, and Evaluation Sub-Unit would participate, the mid-term study, as well as the ex-post evaluation, would be contracted externally to consulting firms and/or academic institutions. During negotiations, assurances were obtained that: (a) short-term studies would be sent to the Bank promptly upon their completion, and those requiring more than six staff-months would be subject to prior approval by the Bank; and (b) the project mid-term evaluation report would be provided to the Bank no later than October 1, 1984 (Annex 10)."

MARANHAO RURAL DEVELOPMENT PROJECT

"Monitoring and Reporting

5.12 Each PMU[13]/ would include an internal monitoring system to provide project administrators with timely implementation information for decision-making and annual planning. Monitoring activities would be directed by the MEPS Operations Coordinators (para. 5.04), supported by the technical specialists located at headquarters and in the field. In addition to information from the Field Coordinators, monitoring information would come from the executing agencies and beneficiaries. Whereas the field staff would be largely concerned with collecting local level information from beneficiaries and executing agencies, the headquarter level staff would be more concerned with the collation of information into reports and collection of information from the executing agencies' head-offices. Standardized forms would be filled in quarterly by the executing agencies and submitted to the respective MEPS for consolidation into sub-project quarterly reports. The state POLONORDESTE Coordinator would collate these into an overall quarterly progress report for the project which would be distributed to the Bank, executing agencies, the State POLONORDESTE Management Council, SUDENE and to

13/ Project Management Unit.

federal agencies. The report would document project implementation progress and expenditures with comparisons to forecasts in Annual Operating Plans using selected key indicators to the extent possible. A list of key indicators is presented in Annex 6. Field staff would also submit monthly reports on a smaller selection of key indicators. In addition to their routine monitoring activities, staff of the PMU's would carry out selected case studies of a small sample of project beneficiaries to assist in problem diagnosis by providing detailed information which may reveal causes of observed deviations from expected results. Assurances were received that: (a) prior to September 30, 1982, the state, INCRA[14/] and COLONE[15/] would submit to the Bank proposals outlining the procedures and reporting format to be followed in each sub-project, and for the overall project, these proposals to be satisfactory to the Bank; (b) the quarterly monitoring reports would be provided to the Bank promptly following their completion and not later than three months after the close of each POLONORDESTE quarter; and (c) the Borrower would provide the Bank with a completion report not later than six months after the Closing Date of the Loan.

Evaluation

5.13 The project's performance would be evaluated to determine whether the expected effects and impacts, implicit in the projects objectives, are being achieved. By their nature, these effects are lagged. The evaluation under the project would include a longitudinal study consisting of baseline, mid-term and post-project surveys of about 300 producers within each sub-project. The evaluation would be carried out by a small independent team including staff of the State Agricultural Planning Commission (CEPA-MA), and the State Center for Data Processing (CETEMA). This team would receive technical assistance from UNDP which is currently assisting with similar work in Maranhao. The Operations Coordinators from the three PMUs would maintain close contacts with the evaluation team but the team would remain administratively independent and would report to the state POLONORDESTE Coordinator. Assurances were received that the results of the baseline, mid-term and post-project surveys would be provided to the Bank not later than December 31, 1982, 1985 and 1987, respectively, with the exception of the results of the baseline survey for the Mearin-Pindare to be furnished to the Bank not later than December 31, 1983."

14/ National Institute of Colonization and Agrarian Reform.

15/ Colonization Company of the Northeast - earlier responsible for implementing the Alto Turi Land Settlement Project (Loan 853-BR) and now one of three project management units under this project.

SECOND BAHIA RURAL DEVELOPMENT PROJECT - NORDESTE

"3.46 .... A separate unit within CAR[16]/ would evaluate the long-term project impact; three upper level staff would be hired, and support personnel, equipment, and support personnel, equipment and operating costs for evaluation activities would be financed under the project....

Monitoring, Evaluation and Reporting

5.06 A project monitoring system, based on that currently being used successfully in the Paraguacu project would be established and managed by the TU[17]/ and would provide for the collection and analysis of information to compare project achievements with targets, alert management to problems as they may emerge, and provide a basis for the annual planning exercise. Initial indicator and time-phased targets established prior to project execution, by component, would provide a benchmark for comparisons to targets adjusted during every annual planning exercise to actual results (Table 9). Execution information would be provided to the TU by the executing agencies on a quarterly basis to be consolidated and submitted to SUDENE.[18]/ An annual review of project impact on agricultural activities would be held at the end of the production cycle. Project attainment of objectives in health, education and community development would also be reviewed annually by TU staff and SUDENE. These periodic impact reports would be incorporated into the regular quarterly project reports as they are completed. Assurances were given by the Federal Government that quarterly monitoring reports would be provided to the Bank not later than three months after the end of the respective POLONORDESTE fiscal quarter.

5.07 Evaluation activities would be periodic in-depth attempts to assess the effect project financed services and infrastructure development are having on the natural environment and on the incomes and welfare of those families the project is supposed to assist. These studies would be undertaken by a centralized unit within CAR, to which this project would contribute three upper level and two middle level professional staff. Evaluation work would focus on: (a) a survey of the current social and economic situation of the beneficiary small farmers; (b) a mid-term review of project execution as of March 31, 1986; and (c) a completion report giving an assessment of overall project impact, to be provided to the Bank within 6 months of the final completion date of the project. The evaluation unit would also be responsible for ad-hoc special studies to be commissioned during project execution. Certain studies could be contracted to competent outside consultants or institutions. It was agreed with the State Government at negotiations that the results of the baseline study, the mid-term evaluation review, and a project completion report would be provided to the Bank by March 31 of 1984, December 31, 1986 and June 30, 1989, respectively."

16/ State Regional Development Corporation.

17/ Technical Unit - project coordination unit.

18/ Superintendency for the Development of the Northeast.

BUILT-IN PROJECT MONITORING AND EVALUATION:
RURAL DEVELOPMENT IN NORTHEAST BRAZIL

Summary Findings of Northeast Brazil Research Project
(From World Bank Research News, Volume 2,
Number 2, Spring 1981)

The Agricultural Economy of Northeast Brazil

"The Northeast problem" has been a common phrase in Brazil for decades; the poorest and least productive large region in the Western hemisphere has been an official concern of Brazilian governments for most of this century. Brazil's economic transformation has left conditions in the Northeast virtually unchanged. Industry, population, and wealth remain concentrated in the Center-South of the country, and the evidence suggests that this concentration is increasing. By 1970, the Northeast, with 30 percent of Brazil's population, was receiving 11 percent of the national income. Per capita income in the Northeast was less than 38 percent of the national average; life expectancy at birth was 48 years, compared with 56 years in all Brazil, and fully 75 percent of rural Northeasterners (over the age of 5) could neither read nor write.

Within the Northeast, 58 percent of the population, or 18 million people, live in rural areas, and most of them depend on agriculture for their main source of income. Despite a variety of government interventions—some of them on a massive scale and all of types which have proven useful elsewhere—and massive outmigration, millions remain in or near absolute poverty and the rural population continues to grow.

A joint research project was begun in 1973 by SUDENE (the Superintendency for the Development of the Northeast) and the World Bank's Development Research Center (DRC). The aims were to undertake the first comprehensive quantitative analysis of Northeastern agriculture, while developing SUDENE's capacity for planning and analysis. The project undertook a large-scale survey of agriculture (8,000 farms, from all 9 states) that had long been planned by SUDENE to overcome the paucity of information on which to base policies and programs. Data from the survey were analyzed econometrically and used by the DRC to develop a linear programming model of Northeastern agriculture. Some comments on the methodology appear at the end of this note. A book, *The Agricultural Economy of Northeast Brazil,* by Gary Kutcher and Pasquale Scandizzo, describing the results of the research will shortly be published.

The analysis of the survey data, which are for 1973, reveals that farm productivity is probably lower, and poverty and underemployment more extensive, than had previously been thought. Agricultural productivity averaged US$26 per hectare of farm land, or US$114 per rural resident, in 1974 dollars, and up to 4 million people were subsisting on money incomes from agriculture of US$50 per capita, with another 5 million probably below US$100 per capita.

Soils are poor in the Northeast, and rainfall in much of the region is inadequate or ill timed. But the reason for this level of poverty lies only partly with the harsh ecological conditions. Technology is primitive, with only a handful of farms using so-called modern inputs and techniques; the use of selected seed varieties and fertilizers is generally confined to cotton and sugar producers, whereas the typical small farmer produces inferior varieties of rice, corn, beans, and manioc, with the aid of little more than labor, land, and a hoe.

Employment opportunities are limited, and about half the workers in agriculture are underemployed. Peak labor demands are concentrated in the planting and harvest months; the survey shows that those depending on temporary agricultural employment usually obtained two to three months'

work at wage rates from US$1 to US$1.50 a day. Up to 900,000 households depended on such employment.

Unemployment and underemployment and corresponding levels of poverty are directly traceable to the degree of entrepreneurial access to land. The 4 percent of agricultural properties that are larger than 500 hectares account for half of the region's agricultural land, while one-third of Northeastern farms have an average size of only 5 hectares (too small to support a family), together accounting for 1.4 percent of the agricultural land. The 800,000 landowning families, who are about one-fourth of all families dependent on agriculture, accrue at least three-fourths of the agricultural incomes. Over two million landless families have incomes from agriculture averaging less than US$300, or about US$50 per capita.

The econometric analysis and programming model simulations both revealed that the performance of farms in generating employment and output varies greatly with farm size. Throughout all agroclimatic zones in the Northeast, large farms (over 500 hectares) employ less than half the labor they should employ to maximize profits; small farms (less than 10 hectares) employ, on the average, 25 times more labor per hectare than do their large farm counterparts, and obtain substantially more output per hectare.

The programming model provided the following insights:

- Most of the smallest farms are not large enough, given current technology and production possibilities, to provide enough work for an average farm family.
- To maximize their profits, the largest farms would employ far more labor than they are currently contracting, and produce far more output.
- Aggregate demand for the agricultural products of the region is an important factor limiting the use of land and labor.
- Risk, though extremely important in the decisions of individual small producers, is relatively unimportant to Northeastern agriculture as a whole. Producers in drought-prone areas use drought-resistant crop varieties and risk-reducing cultivation techniques.

In projecting the model forward five years, to 1978, it was found that the employment problem would not disappear over time through expansion of markets and continued outmigration. Indeed, the projected expansion of agricultural employment barely kept pace with rural population growth, and the incomes of the more impoverished groups were not likely to improve at all.

The model was used to test the efficacy of alternative interventions to alleviate underemployment and poverty in the Northeast. These interventions include measures to foster technical progress to improve yields, wage subsidization policies to promote employment, and policies to promote product demand. The simulations revealed that:

- Subsidies on agricultural wages, even assuming that large farmers would react optimally to them, would lead to negligible increases in employment (of 3.2 percent at a 20 percent subsidy rate). This result reflects the labor-saving activities typically undertaken by large landowners (livestock raising and tree crop production) combined with the comparative advantage in labor-intensive production (of annual and subsistence crops) of small farmers and sharecroppers.
- Technical progress that merely improves yields would lower product prices, benefiting consumers but not small producers, and would not improve employment. This discouraging result is due to the combination of products produced and the differing production orientations of farms of different sizes and types. For exportable products, markets are limited by international demand, and processing and port facilities, while for other products marketing facilities within the Northeast are often too distant to be used by small producers. The latter produce inferior varieties of foodstuffs, for which demand is unresponsive to price and income changes; increases in the production of these foodstuffs are likely to cause declines in price.
- If declines in product prices can be prevented, the growth of markets would be strongly beneficial to all producers, and to small farmers in particular. Although only a few products produced by small Northeastern farms can be marketed outside the Northeast,

their promotion in the urban Northeast would encourage production to expand, with associated increases in farm incomes and in consumption.

- A program combining measures to improve yields and expand demand could increase total agricultural incomes by 14 percent and the incomes of small farms by 31 percent, simultaneously benefiting poorer urban consumers. It would not, however, solve rural unemployment, nor would it adequately address rural poverty.

These results led to the consideration of land reform. A partial land redistribution, involving the creation of 790,000 "module farms," as defined by INCRA (the Brazilian Agency for Colonization and Land Reform), from the 37,000 largest existing farms was simulated, both alone and in conjunction with the other policy instruments described above.

A land reform alone would result in income and employment gains of about 15 percent—about the same as could be achieved through any package of traditional interventions. Its potential distributional gains, however, are far more impressive: the number of families in the income range of about US$500-US$1,000 would rise by more than tenfold, as nontenured workers became family farmers.

By combining such a land reform with an improvement in yields and the promotion of product demand, fairly impressive gains in agricultural incomes, employment, and consumers' welfare could be achieved without a decline in earnings from export crops. The major source of these gains is a more intensive use of land—the cultivation of most of the 15 million hectares classified as productive, but unutilized.

The study concludes that traditional policy and project interventions under the existing agrarian structure could achieve only moderate improvements in productivity and incomes. A land reform offers the best prospects both for gains in efficiency and for raising the incomes of a large segment of the rural poor. Even so, the resource base is too poor, and much of the Northeast is too isolated and drought-prone, to provide adequate incomes for all the region's current rural residents. Measures to increase farm productivity and to make marketing channels more efficient and flexible need to be supplemented by other interventions: education, outmigration, and employment opportunities in other sectors need to be promoted far more vigorously.

Because they indicate that land redistribution may be economically attractive, even within the realm of public investment projects, the results of the study have influenced the design of several Northeast rural development projects, which have included components for land redistribution, land tilling, and security of tenure. More recently, land redistribution has become the centerpiece of a new rural development project to be supported by the Bank in Piaui, one of the poorest states of the Northeast.

The survey undertaken for the study has yielded one of the largest sets of data of their kind in the world. The sample of 8,000 farms was drawn from the 1972 Census of Agricultural Production undertaken by INCRA; it represents farms of all sizes and types in all states and physiographic zones of the Northeast. The data are internally consistent though, as might be expected, not always consistent with other Brazilian data. They have been used in designing several public investment projects, and as the basis for numerous other studies in the United States and Brazil.

The linear programming model developed by the project uses the same broad approach as the model of Mexico's agricultural sector developed by the Development Research Center a few years earlier.[1] Among the modifications made to the approach used for Mexico were new techniques for modeling risk, and farmers' response to it, and sharecropping. The Northeast model differs from the Mexico model and previous agricultural sector models in two other significant respects. First, it is based on survey information collected specially for it; in particular, the data on farm technology, based on nearly 40,000 observations of individual activities, are a far more satisfactory basis for modeling than the secondary data sets generally available in the past. Second, since the constraints on agricultural production in the Northeast differ among farms, the full sectoral model is built up of individual representations of different farm types.

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1. Louis M. Goreux and Alan S. Manne, *Multi-Level Planning: Case Studies in Mexico* (Amsterdam and London: North Holland Publishing Company, 1973).

Any solution to the model not only yields aggregate indices of production, employment, income, and so forth, but also gives a detailed account of the production plan and constraining factors of each farm type. Because the model contains an accounting framework for employment and income by type of agent (farmers of different types, sharecroppers, permanent workers, and temporary workers), the distributional characteristics of alternative simulations can be made explicit.

The research was managed by Gary P. Kutcher and Pasquale L. Scandizzo in the Development Research Center, in association with Arlinda da Costa Lima and other Brazilian researchers.

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BUILT-IN PROJECT MONITORING AND EVALUATION:
RURAL DEVELOPMENT IN NORTHEAST BRAZIL

Monitoring and Evaluation Implementation

1. This Annex provides information about experience with M&E implementation on a project-by-project basis.

Rio Grande do Norte

2. During the design of the project, several Brazilian university departments expressed interest in participating in project evaluation, but during negotiations it was agreed that an M&E unit would be established under the project unit rather than under CEPA. As mentioned in para. 3.05, M&E design was left open-ended at the time of appraisal; however, given serious staffing and funding start-up problems, M&E became, to a certain extent, secondary, although "overall purpose, philosophy and methodology of the monitoring components" (BTO, February 1976) were discussed. Furthermore, "the collaboration of the Federal University of Ceara for the analysis of data related to the general systems of production of the farms on which experiments are taking place" (BTO, August 1976) was to be sought, while the idea of conducting complementary economic studies was to be further explored with the same university. A Bank M&E expert visited Natal in October 1976. By that time, although the M&E unit had been established, "little time had so far been spent on detailed planning and organization of the M&E activities" (BTO, November 1976). In the meantime, a baseline survey had been carried out in the first half of 1976 with analysis contracted out to the University of Ceara. This exercise had revealed serious communication problems between the M&E group and the University, while questionnaire design had not taken into account the need for automated processing. However, the October mission stressed the need for finding solutions to the tabulation problem as well as obtaining expert assistance for the design of the next survey. However, progress remained slow. "The M&E unit has also been weak as one member has taken on much of the daily UT management responsibility, while the other has been assisting the credit and research advisors in their respective activities" (SPV, November 1977). The same Bank monitoring and evaluation expert visited the project again in October 1977 but could only confirm moderate progress in analyzing the baseline survey. Preparation of the follow-up survey had not yet started, a serious shortcoming as the original project design envisaged a project in two phases, the second being dependent on the results of the first. Substantial Bank and project staff time was devoted in 1978 to the mid-term evaluation[1]/ of the project; at that time, the March 1978 mission reported that "essentially nothing had been accomplished so far" as regards M&E (SPV, April 1978). Following mid-term reappraisal, a severe drought hit the project area (in 1979) and evaluation focussed on that and

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1/ "Reappraisal" is probably a better term.

related emergency planning. By May 1980 it was reported that five brief studies had been produced by the M&E unit which had also updated a table of key indicators on project implementation.2/ A specialist visited the project in August 1981 to review the monitoring system. By that time, field monitoring had been substantially paralyzed for about a year due to lack of transport. Since then, not much progress has been reported, even though the M&E component was rated satisfactory (SPV, August 1982). In the meantime, the closing date was extended by two years to September 1984. Substantial staff attention was subsequently devoted to accelerating disbursements under the credit component and to the preparation of a second rural development project in Rio Grande do Norte.

Ceara

3. The first project was approved in September 1977. One year later, a supervision mission reported that monitoring was still weak. While various reports were prepared, quarterly reports provided "little insight into the quality of execution or into the problems being encountered. While physical indicators measured are interesting, they fall far short of measuring the impact of the project on the farmers, and are used as a strict budgeting tool than as a general management tool" (SPV, November 1977).3/ The December 1978 supervision mission recommended that steps be taken to implement, without delay, the M&E program, and that efforts should begin to assess the impact of agricultural services and physical infrastructure on productivity and production. For most of 1979 and 1980, the evaluation unit was understaffed and, therefore, behind schedule, and staff were frequently assigned additional, unrelated duties. A farm survey (covering a sample of 200 farms) was undertaken in June 1979, but by December 1980 only a preliminary draft was available for discussion with field staff. In the meantime, the project introduced an interesting field memo system which required all staff visiting the field to report on their quantitative and qualitative findings, although its use was reported limited (BTO, December 1979). By end 1981, M&E activities for the project were integrated into those for the second project. By mid-1982, it was clear that project M&E had not been a success. During the life of the project only a limited number of ad hoc evaluation exercises were carried out; the only other beneficial aspect was that experience gained reportedly helped in formulating the second project.

> "In spite of the difficulties encountered in activating the project management monitoring and evaluation units, it is clear now that experience gained on Ibiapaba was instrumental in helping formulate an adequate management set-up for the state-wide project and shortened the time usually needed to activate such units. During the project's life

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2/ By that time, such tables of key indicators had already been appearing as annexes to SARs for some time, since the appraisal of the Bahia project (October 1977).

3/ This was confirmed by the May 1978 supervision mission.

to date a number of ad hoc evaluation exercises were held in the Ibiapaba area (on impact of the social extension workers; the impact of agricultural services on farmers' activities; the present situation of settlers in the colonization scenario; etc.) and the results also served in the formulation of the Ceara Second Rural Development Project" (SPV, June 1982).

4. In the meantime, the second project was approved in December 1980. The new project had a monitoring, evaluation and special studies section under the project coordinating management unit. However, even with the experience of the first project, limited attention was paid to M&E during preparation. "Little has been done on preparing a monitoring system for the state-wide project or an evaluation methodology. Emphasis should be made on the need for timely and accurate monitoring feedback, bringing up implementation issues to management and on the need for a survey methodology to adequately evaluate overall project progress at the farm level" (Preparation BTO, September 1979). As basic arrangements for project administration and M&E had not yet been worked out, a consultant specialist participated in the December 1979 preappraisal. Even then, the Bank found it necessary to impose a condition of negotiations requiring the project to prepare terms of reference for specialist assistance in starting up M&E. "The monitoring unit was well staffed and doing a very detailed job" (SPV, May 1981). However, it was a long time before the Bank, received the standardized data requirements for participating agencies, the farm survey, or project evaluation plans. Bank staff attention during 1982 was diverted to the reorganization and extension of the Ibiapaba project. Substantial work has been done on management of information flows and reporting (monthly internal reports, quarterly reports for SUDENE and the Bank by subregions and components, and a summary report to the Governing Council), but there is substantial duplication between these reports, and targeting of reporting leaves much to be desired. Substantial work on how to go about evaluation has also been done, but output to date has been limited. Project staff reported substantial discussions with the Bank about M&E but mainly on principles rather than the specifics and details of design. Only limited assistance from the Bank or SUDENE on such specifics was reported, and there is a strong impression that such assistance would have been most welcome.

Paraiba

5. Substantial expertise was provided during preparation and appraisal regarding monitoring and evaluation. The World Bank's Development Economics Departments assisted the preparation task force with project preparation efforts related to population, human resources and primary data collection. An M&E expert also participated in the appraisal,[4/] but detailed programming

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4/ When the appraisal working paper was reviewed, some Bank staff expressed doubts about the local capability to process all the data.

of M&E work was left to the UT assistant coordinator; the first implementation mission (March 1978)[5/] noted that this assistant coordinator had been appointed but that nothing had been done by then regarding evaluation. That mission agreed with CEPA[6/] that a new baseline socio-economic survey would be carried out by the Federal University of Paraiba, and that follow-up surveys would be carried out each year thereafter. The baseline survey was executed, and a final report was issued with only minor delay (August 1979). No substantive further evaluation was done by the CEPA evaluation unit, initially because of understaffing (the unit was not fully staffed until June 1979) and subsequently because of its academic orientation (work done related to methodological questions and criticisms of the baseline survey). Only after some staff had been reassigned could it be agreed (April 1980) to drop academic work and to concentrate on measuring project indicators and conducting brief practical studies. A few of the latter studies have been prepared, but when the project was again facing implementation difficulties and approaching the closing date, attention was focussed on a complete review[7/] of the project as part of a request for extension of the closing date. There were also problems with monitoring. Clear organizational focus and responsibility was lacking. The November 1979 supervision mission reported: "With regard to monitoring, it is theoretically under UT responsibility, yet nobody has been responsible for it so far despite agreement with the last supervision mission[8/] on the possible appointment of a monitoring officer. Moreover, the UT technical professionals who were expected to participate in monitoring activities have been overloaded with paperwork and bureaucratic activities. As a result, nothing has been done on monitoring" (SPV, February 1980). However, following the placement of an additional person in the unit in late 1981, monitoring and financial reporting improved considerably (January 1982).

Bahia

6. A field survey of 550 farmers was completed in February 1977 as part of the preparation process, and M&E was given substantial attention during appraisal. "Although not included in the issues paper, the meeting agreed that emphasis should be placed on developing an effective system of M&E. In line with this it was further agreed that the matter would be taken

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5/ Negotiations took place in Washington in February 1978.

6/ Under the Paraiba project, evaluation was the responsibility of a unit separate from UT, under CEPA.

7/ This review would consist of a small socio-economic survey, an operational assessment of each component, and a detailed planning proposal for the loan extension period.

8/ April/May 1979 supervision mission.

up in detail by the post-appraisal mission"9/ (decision memo, December 1977). During yellow cover review, suggestions were made to further detail monitoring plans and farm productivity surveys and to require (in the terms of reference) the consultant, who was to be recruited to work on M&E details, to relate data collection requirements to analytical capabilities. Again, while tasks and objectives were clearly set out, actual details were left for resolution during the implementation period. However, rapid progress was made in staffing and conceptualizing the M&E work program. But the November 1978 supervision also reported that "M&E staff, instead of in separate units, were found grouped in a single team, contrary to the set-up foreseen in the appraisal report... The concept of an independent evaluation unit had never been well received by the project coordinator..." (SPV, January 1979). Furthermore, new staff had to acquaint themselves with the job, and therefore little was done to finalize a work program; reportedly the new staff also tried to develop monthly monitoring forms of their own instead of establishing pre-coded monitoring forms in cooperation with the executing agencies. However, M&E continued to develop, and except for the envisaged annual farm productivity survey, most other tasks were being pursued by end 1978. The University of Bahia had been contracted for two project-related studies.10/ In early 1979, the M&E unit was virtually dismantled as a result of staff dismissals, and work was further frustrated by uncertainty over the future administrative location of the unit and funding bottlenecks which affected all project activities. A consultant from the university of Bahia was eventually recruited to help design the annual productivity survey. Consultants in monitoring and evaluation were never contracted even though M&E staff felt that they would have liked some technical assistance in M&E. In terms of monitoring, the unit went through the various reporting cycles as required by external agencies.11/ In addition, the unit developed a field memo system. Unit staff visit the field regularly and report their findings. These assessments are cumulated into a monthly matrix report which indicates goals, achievements, status comments, and problem indicators and

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9/ In fact, no post-appraisal took place, but the matter was given further attention during appraisal processing.

10/ A "perception" study and a study of labor force requirements in the project area.

11/ Initially there was no format; then a series of standardized formats were used (1976-80) resulting in quarterly reports of 300+ pages. Then the SAPI-GRAFF system to control federal funding was introduced. This was a disbursement-oriented summary financial reporting system and left little room for qualitative assessments. A new reporting format was introduced by SUDENE and is prepared quarterly by the unit on the basis of detailed reports submitted by executing agencies. Reportedly they send one of these reports to the Bank per year: this is the January-March quarterly, which is a cumulative report covering the preceding year. The last report sent was about 440 pages.

resolution recommendations, per component. It is used intensively by project management. In terms of evaluation, under the circumstances, the unit did not really start working until end 1979. An initial farm survey was designed by the unit itself and executed in 1980, and in 1981, the survey gathered additional income and labor data. Subsequently, a new consultant was recruited by the Bank, and an evaluation report was produced in February 1983 which concentrated on impact analysis over the project implementation period in support of a request for a three-year extension of the closing date. Evaluation[12/] is now being centralized for all POLONORDESTE projects in the state.

Sergipe

7. The monitoring unit was originally separate from the evaluation unit in this project. M&E was generally commented upon favorably, although start-up had some problematic moments. "As in other Bank-supported POLONORDESTE projects, M&E work is expected to play a crucial role in project administration and management. So far, the Sergipe M&E staff have no experience with M&E systems that would go beyond traditional physical and financial recording and aim at more immediate inputs to management. The group had tried to list key indicators for some of the project components, but had not yet developed any work program. In addition, they had experienced set backs in their work due to staff turnover. Current staffing consists of two evaluation staff members, both are agronomists. In the project administration unit, one economist statistician is in charge of monitoring. The mission recommended that the second monitoring position be filled by a social scientist, in order to introduce expertise necessary for the observation of attitudinal factors" (October 1979 SPV BTO). A work program was subsequently communicated to the Bank, and the Bank commented as follows: "Given our shared concern with the contribution M&E is to make to day-to-day management and, ultimately, to implementation quality, a swift and full implementation of the M&E provisions now seems of paramount importance. This includes further preparation of the first special farm level analysis" (letter, January 1980). Reportedly implementation went well thereafter. "The M&E Unit is showing good progress; it has prepared the productivity evaluation study and is in the process of evaluating its own impact on decision making" (SPV, May 1981). Around that time, the project unit was transferred to the planning commission, and M&E functions were combined into one sub-unit. Progress continued to be reported as satisfactory. Reporting was handled by the sub-unit in charge of rural development planning rather

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12/ As defined in the SAR (Second Bahia Rural Development Project, Report No. 4249b-BR dated April 1, 1983), "evaluation activities would be periodic in-depth attempts to assess the effect project financed services and infrastructure are having on the natural environment and on the incomes and welfare of those families the project is supposed to assist." Monitoring would include an annual review of project impact on agricultural activities and of attainment of objectives in health, education and community development (SAR, paras. 5.06 and 5.07).

than the one in charge of implementation coordination, as in many other project units. "Although the monitoring and evaluation sub-unit continues to make substantial progress, it was found during the mission[13]/ that UT had a very poor notion about the necessity for and the scope of the project mid-term evaluation, which was due to begin by March 1982. It was decided that detailed proposals should be sent to the Bank and SUDENE for review in April-May 1982, and the evaluation itself postponed accordingly" (SPV, February 1982). This was done, and detailed proposals were subsequently presented.

Pernambuco

8. Attention to monitoring and evaluation came late during project preparation; implementation was also late. In fact, the monitoring system was found to be unsatisfactory, and by mid-1980, evaluation had not yet started. "Very sketchy proposals were made for the inclusion of a M&E group within the technical unit. No work has been done to date on establishing specific objectives and indicators for each component, or on the development of surveys to measure the impact of the project on the area and target group" (preparation BTO, August 1978).[14]/ Analysis of test surveys in five communities was delayed due to lack of funds. As implementation went ahead, relations between the University (responsible for evaluation) and project management and executing agencies was not always ideal. "The UT has not been able to prepare satisfactory monitoring reports. It has improved the system of preparing quarterly reports for SUDENE, which are necessary for the release of counterpart funds. However, these quarterly reports are mainly financial and relate only superficially to the activities performed. They do not compare actual achievements with the original objectives nor do they indicate causes of delays, flag problems or suggest necessary adjustments. Agreement was reached on a work program to provide more meaningful monitoring reports by the end of the year. The major constraint is the uncertain working relationship between UT and the executing agencies" (SPV BTO, August 1980). Substantial improvements have occurred since. The Bank made its APAS[15]/ available, as well as input data used at appraisal. The reporting format changed, but submission of reports could have been more timely, as was regularly noted. However, "the feedback to the monitoring unit from the project manager, the project coordinator, the evaluation team[16]/ and

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13/ SPV, January 1982.

14/ Appraisal took place in October 1978.

15/ Agricultural Project Analysis System; a computerized program.

16/ The evaluation team had been requested by supervision missions to send comments on monitoring reports to the technical unit within one week of receipt.

participating agencies is almost nil"[17]/ (SPV, September 1981). Baseline studies were completed in 1982. "The studies and analysis are on a high professional level, but their benefit to the project is small because they are written in a sophisticated, academic manner, making them difficult for most project staff to understand or use" (SPV, April 1982).

Piaui

9. As in the case of the Maranhao project, land problems required major attention during preparation, and M&E was not covered in any Bank reporting during that period. Substantial attention, however, was paid to these aspects during appraisal and post-appraisal,[18]/ and the appraisal report (Annex 10) contains a wealth of information on M&E. Monitoring project activities developed quite well, but evaluation activities have not yet taken place, as reported in various supervision reports.

> "The M&E sub-unit of the project management unit is functioning well. The monitoring system envisioned at appraisal is essentially in place: sub-coordinators are providing timely information to management, and quarterly reports are prepared promptly and contain useful indicators. Thus far, direct beneficiary information (through the use of postcards) has not been collected, but this is expected to begin shortly. The only problem with the monitoring system is that it remains somewhat isolated from the regional information system. Project management and monitoring personnel perceive SUDENE's quarterly report format to be excessively bureaucratic and virtually useless. Consequently, they have allowed the other Technical Unit which manages the rest of the state POLONORDESTE projects to prepare the SUDENE quarterly report for the project. That report, which generally appears two months after the project's internal monitoring report, contains few meaningful indicators. The problem is that, in some cases, executing agencies are being asked to provide two different sets of implementation information, one for the PMU and the other for the state POLONORDESTE Technical Unit. The mission recommended that the dual monitoring system which has arisen should be consolidated, with the project management unit taking an active lead in preparing and reformulating the SUDENE quarterly report" (SPV, May 1982).

17/ The same mission also "urged said officials to pay more attention to the reports because high monitoring expenses would not be justified without effective use by project management levels." This is a lop-sided argument. Information should not be used just because it is produced. If information is not used, it is a sign that there is something wrong with the management information system.

18/ In fact, a specific part of the post-appraisal TOR was to reach "agreement on specific systems for monitoring and evaluating the progress of the project."

"Monitoring activities in the project continue in a satisfactory fashion. Both quarterly quantitative reports and comprehensive six-month progress reports prepared shortly before each mission's arrival appear to be accurate and often are helpful in focussing on issues to be dealt with by project management, the Secretary of Planning, and the Bank mission. Although weak sub-coordinators in some areas (e.g. marketing) have hindered rapid management response, the day-to-day internal monitoring by the better sub-coordinators (e.g. fish, physical infrastructure) has been very effective. Hopefully, monitoring will improve even more when the regional field coordinators are in place ... Evaluation activities contemplated for this stage of the project (i.e. short studies) have not yet been initiated. It is expected, however, that prior to the next mission, at least one such study on the land market will have been completed" (SPV, October 1982).

Maranhao

10. As in Piaui, land regularization was the major focus of attention during project design. But, as reported earlier, M&E design was incomplete.19/ Effectiveness was delayed (four extensions were given) and implementation seriously affected by funding delays and shortfalls. The baseline surveys were not completed as scheduled.20/

19/ Assurances were obtained that the Bank would receive proposals for monitoring format and procedures by September 30, 1982, and that baseline survey results would be submitted by December 31, 1982 (project approved June 1982 and appraised August/September 1981).

20/ As of May 1983, two had not been completed and field work for the third not yet started (three baseline studies are needed as this project covers three separate sub-project areas).

BUILT-IN PROJECT MONITORING AND EVALUATION:
RURAL DEVELOPMENT IN NORTHEAST BRAZIL

COMMENTS FROM MINISTRY OF AGRICULTURE

CINGRA 03351/83 Brasilia, December 2, 1983

MINISTRY OF AGRICULTURE

Dear Sir,

I refer to your letter of September 30, 1983, addressed to the Minister of Agriculture, attaching copies of the first draft of the Case Study on Monitoring and Evaluation on nine PDRI's.

As requested, the "Coordenação Geral dos Programas Especiais", of this Ministry issued the attached comments, which I hope you can take into consideration in formulating your final conclusions.

Yours sincerely,

Eliana Maria Martins Ferreira
Deputy Coordinator of International
Agricultural Affairs

Mr. Shiv S. Kapur
Director
Operations Evaluation Department
The World Bank
1818 H Street, N.W.
Washington, D.C. 20433
USA

Translated
from Portuguese

MINISTRY OF AGRICULTURE

COMMENTS BY THE COORDENACAO GERAL
DOS PROGRAMAS ESPECIAIS

The Ministry of Agriculture attaches importance to the effort made by the World Bank in presenting an overview of the monitoring and evaluation systems used for all the projects it has financed. The criticisms are valid. The Ministry endorses the following points: the lack of information so far on the impact of POLONORDESTE and the need for a system to be developed to measure this impact; the shortcomings and inadequacies of existing monitoring and evaluation methods; the need to use the data obtained from the monitoring systems as a management tool and not merely as inputs for reporting to regional and national authorities; the excessive amounts of information required from the various executing agencies; the need to put into practice ideas that have already been amply discussed around the table. The document also states that neither the Bank nor SUDENE has so far provided the assistance needed to improve the monitoring systems and to make the flow of information more effective, adding that in the field of impact evaluation there is much to be done and substantial assistance is still needed (this component was left incomplete in most appraisals).

It would be worthwhile for the Bank to provide POLONORDESTE with assistance and guidance in this area. The experience that the Bank has

acquired in the field of monitoring and evaluation in the course of all the different missions and seminars it has conducted in connection with its projects in the Northeast is summarized in Chapter IV, "Results to Date - Conclusions and Lessons," offers interesting suggestions.

One aspect not specifically mentioned is the need for the World Bank and SUDENE to try and get EMBRAPA and EMBRATER more effectively involved in the formulation of monitoring and evaluation systems. We feel that such participation is important because it has always been, and will always be, required of the executing agencies affiliated with EMBRAPA and EMBRATER and the direct representatives of COBAL in the Brazilian States, by virtue of their technical, political and administrative relations with the respective Empresas, to maintain a flow of information in accordance with procedures established by the latter. Since this information is more physical and financial in nature it is not of much help to project managements for decision-making purposes. While it might be easier and more decentralized to work only with the States and the Regional Coordination Office, the fact remains that the Empresas Nacionais are going to continue to exist and that their affiliates or representatives in the States will be required to maintain flows of information according to the needs and interests of each Empresa. Thus greater participation by the Empresas in the formulation of new systems might not only make for better systems but might also facilitate the activities of their own affiliates, if, based for example on a Program/Empresa agreement, the data submitted by the executing agencies to the Coordenaçao do Programa were the same as those submitted to the respective Empresas.

The Empresas linked to MINAGRI have enthusiastically taken part in the missions in which they have been invited to join. Although it might be

more difficult to reach final conclusions on programming when the level of discussion is opened up, experience shows that problems can arise at the implementation stage unless there is participation of this kind. MINAGRI suggests that more time be invested in the programming and formulation of the new monitoring and evaluation systems, in the form of encouraging more extensive participation by its Empresas. This will benefit the Program, guard against future problems, and promote greater integration between State institutions and State activities.

BUILT-IN PROJECT MONITORING AND EVALUATION:
RURAL DEVELOPMENT IN NORTHEAST BRAZIL

COMMENTS FROM MINISTRY OF INTERIOR

Translation from Portuguese
Telex from MINISTRY OF INTERIOR
Brasilia, Brazil

DECEMBER 29, 1983

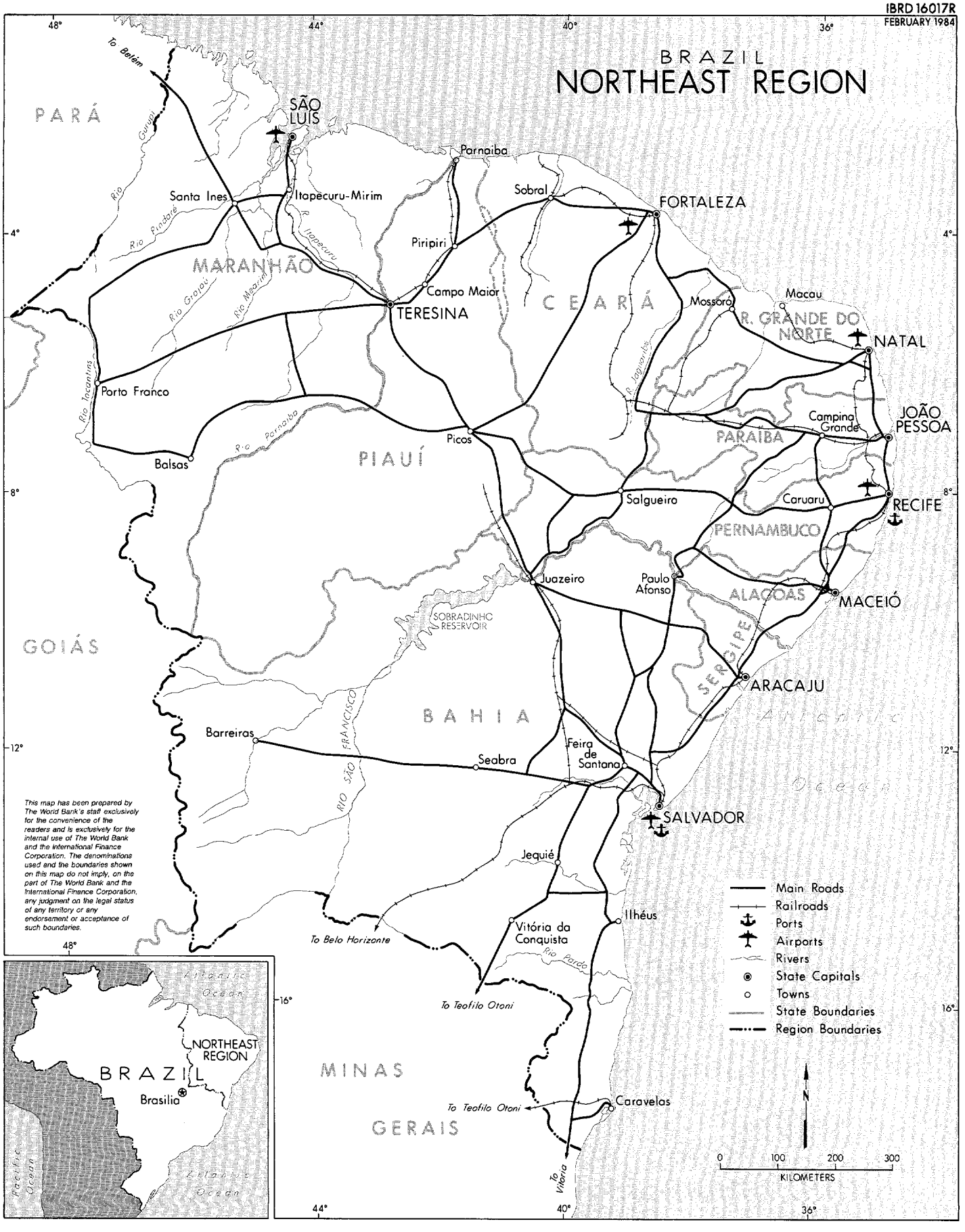
DR. SHIV S. KAPUR:

I ACKNOWLEDGE RECEIPT OF YOUR LETTER REGARDING THE CASE STUDY -- MONITORING AND EVALUATION, NORTHEAST BRAZIL AND DECLARE MY CONCURRENCE WITH THE POINTS DISCUSSED IN THAT DOCUMENT. I AGREE ON REDEFINITION OF THE MONITORING AND EVALUATION STRUCTURES WITH A VIEW TO ACHIEVING SPECIFIC OPERATIONAL AND LOCAL GOALS, COMMUNITY PARTICIPATION AT THE INITIAL PLANNING STAGE, STREAMLINING OF ADMINISTRATIVE PROCEDURES, SUPPORT FOR TECHNICAL TERMS, EVALUATION BY A SAMPLING OF BENEFICIARY COMMUNITIES, AND EFFECTIVE COORDINATION OF ACTIONS UNDERTAKEN.

ROBERTO CAVALCANTI DE ALBUQUERQUE
ASSISTANT SECRETARY GENERAL, MINISTER OF INTERIOR

IBRD 16017R
FEBRUARY 1984

BRAZIL
NORTHEAST REGION



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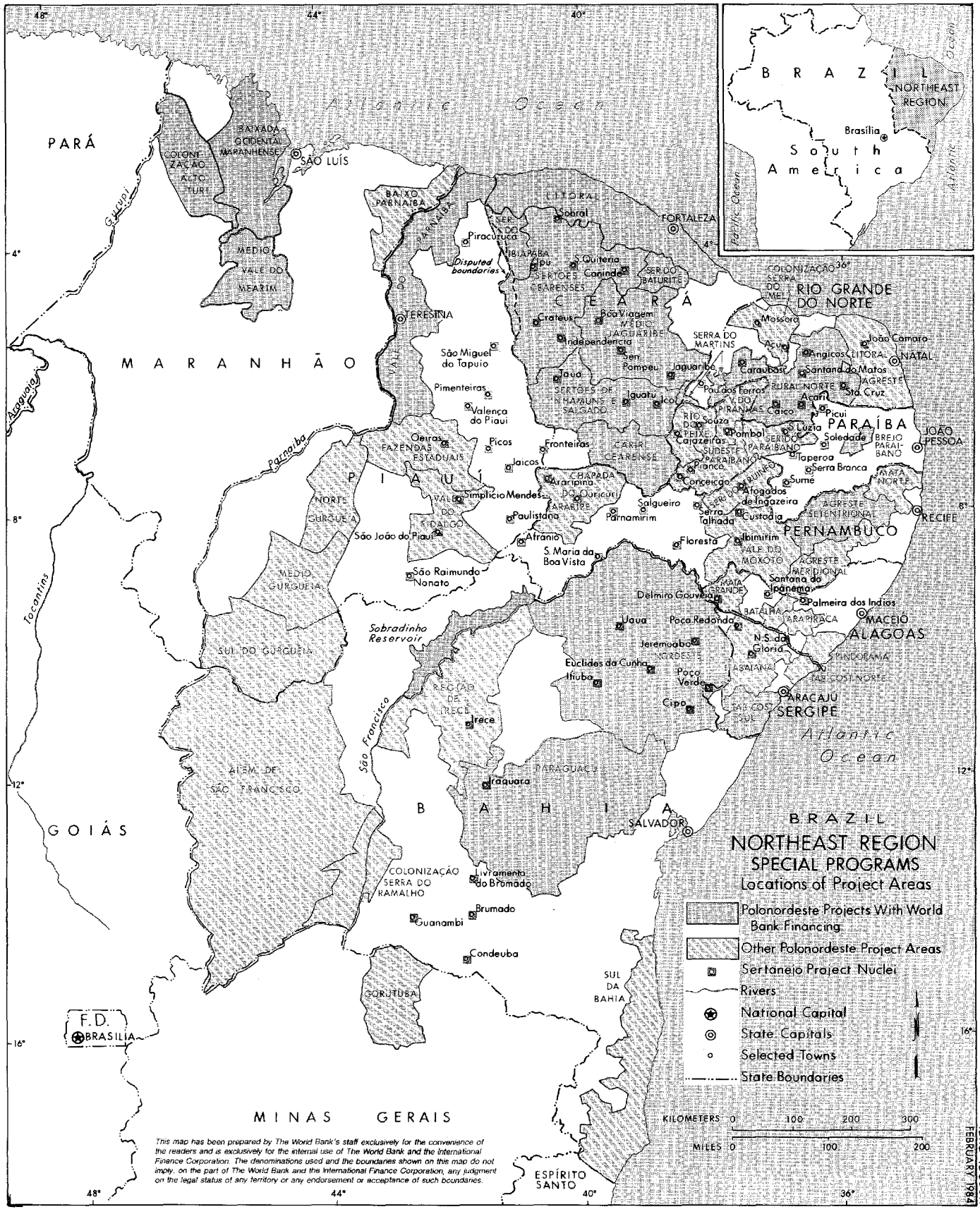
BRAZIL
NORTHEAST REGION
SPECIAL PROGRAMS
Locations of Project Areas
Polonordeste Projects With World Bank Financing
Other Polonordeste Project Areas
Sertanejo Project Nuclei
Rivers
National Capital
State Capitals
Selected Towns
State Boundaries
KILOMETERS 0 100 200 300
MILES 0 100 200
PARÁ
MARANHÃO
PIAUÍ
CEARÁ
RIO GRANDE DO NORTE
PARAÍBA
PERNAMBUCO
ALAGOAS
SERGIPE
BAHIA
GOIÁS
MINAS GERAIS
ESPÍRITO SANTO
Atlantic Ocean
Pacific Ocean
BRASILIA
SÃO LUÍS
TERESINA
FORTALEZA
NATAL
JOÃO PESSOA
RECIFE
MACEIÓ
ARACAJÚ
SALVADOR
Disputed boundaries
Sobradinho Reservoir
São Francisco
Tocantins
Parnaíba
Gurupi
Araguaia
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FEBRUARY 1984