

Document of  
The World Bank

Report No: 25973

IMPLEMENTATION COMPLETION REPORT  
(CPL-41470)

ON A

LOAN

IN THE AMOUNT OF US\$90.0 MILLION

TO THE

FEDERATIVE REPUBLIC OF BRAZIL

FOR A

LAND REFORM AND POVERTY ALLEVIATION PILOT PROJECT

December 4, 2003

**ESSD**  
**Brazil Country Management Unit**  
**Latin America and Caribbean Region**

## CURRENCY EQUIVALENTS

(Exchange Rate Effective December 31, 2002)

Currency Unit = Real

R\$1.00 = US\$ 0.28

US\$ 1.00 = R\$3.53

## FISCAL YEAR

January 1 to December 31

## ABBREVIATIONS AND ACRONYMS

BB	Bank of Brazil
BNB	Bank of the Northeast of Brazil
CAS	Country Assistance Strategy
CF	Crédito Fundiário
CT	Cédula da Terra
CONTAG	National Confederation of Agricultural Workers
FETAG	State Federations of Agricultural Workers
IDH	United Nations Human Development Index
IICA	Inter-American Institute for Cooperation in Agriculture
INCRA	National Institute of Colonization and Agrarian Reform
LCRD	Local Council for Rural Development
MDA	Ministry of Agrarian Development
MEPF	Ministry of Agrarian Reform (replaced by MDA)
MIS	Management Information System
NEAD	Center for Agrarian Studies
NRDP	Northeast Rural Development Program
NTU	National Technical Unit
PPA	Government Development Plan 2000-2003 (multi-year)
PROCERA	Credit Program for Land Reform Beneficiaries
PRONAF-A	National Program to Strengthen Family Agriculture
RPAP	Rural Poverty Alleviation Program
SAT	Land Purchase Subproject
SIC	Community Investment Subproject
STU	State Technical Unit
TJLP	Long Term Interest Rate

Vice President:	David de Ferranti
Country Director	Vinod Thomas
Sector Manager	John Redwood
Task Team Leader/Task Manager:	Luis O. Coirolo

**BRAZIL**  
**Land Reform and Poverty Alleviation Pilot Project**

**CONTENTS**

	<b>Page No.</b>
1. Project Data	1
2. Principal Performance Ratings	1
3. Assessment of Development Objective and Design, and of Quality at Entry	2
4. Achievement of Objective and Outputs	5
5. Major Factors Affecting Implementation and Outcome	24
6. Sustainability	27
7. Bank and Borrower Performance	28
8. Lessons Learned	31
9. Partner Comments	33
10. Additional Information	34
Annex 1. Key Performance Indicators/Log Frame Matrix	35
Annex 2. Project Costs and Financing	37
Annex 3. Economic Costs and Benefits	39
Annex 4. Bank Inputs	43
Annex 5. Ratings for Achievement of Objectives/Outputs of Components	45
Annex 6. Ratings of Bank and Borrower Performance	46
Annex 7. List of Supporting Documents	47

<i>Project ID:</i> P006475	<i>Project Name:</i> Land Reform and Poverty Alleviation Pilot Project
<i>Team Leader:</i> Luis O. Coirolo	<i>TL Unit:</i> LCSER
<i>ICR Type:</i> Core ICR	<i>Report Date:</i> December 8, 2003

## 1. Project Data

*Name:* Land Reform and Poverty Alleviation Pilot Project *L/C/TF Number:* CPL-41470

*Country/Department:* BRAZIL *Region:* Latin America and the Caribbean Region

*Sector/subsector:* General Agriculture, fishing and forestry (70%); Other social services (25%); and General public administration (5%)

*Theme:* (i) Land management (0083 P); (ii) Civic engagement, participation and community driven development (0057 P); (iii) Rural services and infrastructure (0078 P); (iv) Other social development (0062 S)

### KEY DATES

	<i>Original</i>	<i>Revised/Actual</i>
<i>PCD:</i> 11/20/1996	<i>Effective:</i> 05/31/1997	07/31/1997
<i>Appraisal:</i> 01/20/1997	<i>MTR:</i> 12/31/1998	02/01/2000
<i>Approval:</i> 04/22/1997	<i>Closing:</i> 06/30/2001	12/31/2002

*Borrower/Implementing Agency:* FED. REP. OF BRAZIL/MINISTRY OF AGRARIAN DEVELOPMENT

*Other Partners:* State Governments of Bahia, Ceara, Maranhao, Minas Gerais and Pernambuco

STAFF	Current	At Appraisal
<i>Vice President:</i>	David de Ferranti	Shahid Javed Burki
<i>Country Director:</i>	Vinod Thomas	Gobind T. Nankani
<i>Sector Manager/Director:</i>	John Redwood	Constance Bernard
<i>Team Leader at ICR:</i>	Luis O. Coirolo	Luis O. Coirolo
<i>ICR Primary Author:</i>	Anna Roumani with Joao Barbosa de Lucena and Brazil Northeast Team	

## 2. Principal Performance Ratings

(HS=Highly Satisfactory, S=Satisfactory, U=Unsatisfactory, HL=Highly Likely, L=Likely, UN=Unlikely, HUN=Highly Unlikely, HU=Highly Unsatisfactory, H=High, SU=Substantial, M=Modest, N=Negligible)

*Outcome:* S  
*Sustainability:* L  
*Institutional Development Impact:* SU  
*Bank Performance:* S  
*Borrower Performance:* S

	QAG (if available)	ICR
<i>Quality at Entry:</i>	HS	S
<i>Project at Risk at Any Time:</i>	No	

### 3. Assessment of Development Objective and Design, and of Quality at Entry

#### 3.1 Original Objective:

Project objectives were: (i) increase the incomes of about 15,000 poor rural families through improved access to land and participation in complementary, demand-driven community subprojects; (ii) raise the agricultural output of lands included in the project; and (iii) pilot-test a market-based approach to land reform in which beneficiaries would obtain financing for the purchase of suitable properties negotiated directly between rural communities and willing sellers and which, if it proved successful, would enable the Government to accelerate the pace and lower the cost of its programs to improve land access by the rural poor throughout the Northeast and elsewhere in Brazil.

#### 3.2 Revised Objective:

Project objectives were not revised.

#### 3.3 Original Components:

The project (known in Brazil as *Cedula da Terra* – CT) financed five components: (i) *Land Purchase* for 15,000 poor farm families organized into community associations (estimated US\$45.0 million, 30% of total). This component was financed 100% by the Federal Government of Brazil; (ii) *Community subprojects* for those same beneficiary groups, through small matching grants for investments, technical assistance and start-up (estimated US\$84.3 million, 56.2% of total); (iii) *Community Development Support, Technical Assistance and Training* (institution building) through consulting services and training, and public dissemination of information about the project (estimated US\$3.9 million, 2.6% of total); (iv) *State Project Administration, Supervision and Monitoring* by the five participating States of Bahia, Ceará, Maranhão, Pernambuco and Minas Gerais (estimated US\$10.1 million, 6.7% of total); and (v) *Federal Project Evaluation and Dissemination* (estimated US\$6.7 million, 4.5% of total). Estimated total project cost was US\$150.0 million with a Bank Loan of US\$90.0 million (see Annex 2).

#### 3.4 Revised Components:

Project components were not revised.

#### 3.5 Quality at Entry:

Rated Highly Satisfactory

The Project was part of the Bank's Rural Development Compact and was rated by the Quality Assurance Group (QAG) as one of two Best Practice operations in LAC in 1997, for quality at entry. According to QAG, the project: (i) built on previous Economic and Sector Work, was reflected in the CAS, was the result of strategic choices among options, and provided an opening to pursue poverty reduction through an innovative approach; (ii) concentrated on geographical areas where the rural poor live and on assets which the poor hold, effectively targeting beneficiaries; (iii) was demand-driven, with beneficiaries organizing into associations, identifying and negotiating the purchase of properties, assuming responsibility for purchase of land,

identifying and implementing complementary subprojects, and contracting technical assistance to improve capacity to manage and develop their newly-acquired lands, in accordance with an Operational Manual; (iv) financed the creation and improvement of productive assets, and cost recovery and sustainability were features of the design; (v) included detailed economic analysis demonstrating that the project would have a strong impact on the poor and that economic and financial returns would remain robust under various scenarios; and (vi) employed systematic monitoring and evaluation, combined with regular, well-conceived supervision and follow-up.

This was the first market-based land reform operation ever approved by the Bank after a Board Seminar in July 1996 discussed the potential benefits of this new approach. The project tested a land reform mechanism under which beneficiary associations of poor rural laborers and farmers, either landless or with insufficient land for subsistence, obtain financing to purchase suitable agricultural properties for which they negotiate directly with willing sellers. This mechanism was the direct outgrowth of the Bank and Federal Government's ongoing search in the 1970s and 1980s, through research, institutional development (establishing and strengthening State Land Institutes), settlement, land administration, survey preparation and land titling activities, for more efficient and effective instruments to address excessive land concentration in the Northeast region.\* Research results demonstrated the linkage between excessive land concentration and rural poverty, and recommendations urged rapid land re-distribution in this region.

\* See *Rural Development: Issues and Options in Northeast Brazil*, Report 665a-BR; *The Agricultural Economy of Northeast Brazil*, Johns Hopkins, 1981; *Parnaíba Valley Development Project* (State of Piauí), Loan 2015-BR; National Land Administration Program – Northeast Region Land Tenure Project, Loan 2593-BR, 1985; *Brazil Poverty Assessment*, 1995 (Report No. 14323-BR); and *Bank Land Policies Paper*, World Bank 1996.

In the 1990s, the more general shift to demand-driven community-based development programs in the Northeast of Brazil, also financed by the Bank, yielded important lessons suggesting new ways to address land issues. Findings in the 1995 Brazil Poverty Assessment suggested that stabilization, falling land prices and low inflation were creating an environment where promoting efficient land markets could be an important anti-poverty instrument by improving access of the poor to land. A 1996 Bank Land Policies Paper reviewed global experience in terms of the costs, inefficiency and conflictive nature of administrative instruments (e.g., expropriation and government re-distribution) to achieve land reform, and recommended experimenting with market-based mechanisms.

In this context, the Brazil CAS Report 14569, June 29, 1995 and Progress Report, June 20, 1996 identified poverty reduction as the central objective of Bank assistance efforts, recommending specific anti-poverty policies in a decentralized context. Subsequently, the June 1997 CAS for Brazil and CAS Update of May 1998 cited community and market-based strategies for land re-distribution and rural infrastructure as key elements of the Bank's rural poverty strategy.

Brazilian Government commitment to land reform increased significantly after 1995 with some 300,000 landless families targeted for settlement. The mechanisms employed to settle the actual 580,000 families on 19.6 million hectares (of which 128,000 families/3.5 million hectares were in the Northeast region) were largely traditional, i.e., expropriation or direct purchase. The community-based approach to land reform was piloted within the Ceará Rural Poverty Alleviation Project (Loan 3918-BR); 700 families acquired 23,377 hectares at a cost of R\$6,083/family and

R\$179/hectare for the land, plus R\$5,574/family for complementary on-farm investments executed through the community-driven methodology. Research results demonstrate that land reform programs require the combined effects of land acquisition and on-farm investment for their success and sustainability.

Communities responded enthusiastically to the Ceará pilot. Execution was both rapid and low cost relative to traditional, state-administered methods of land reform. During the pilot's 12-month implementation, the number of families gaining access to land in Ceará virtually doubled the number of beneficiaries reached in the previous two decades of land reform by this state. Recognizing the model's promise as a viable complement to other methodologies for land reform, the Federal Government sought Bank support for a broader pilot in five Northeast states.

Importantly, changing conditions at that time in Brazil and the Bank created a unique opportunity to innovate. Declining agricultural credit subsidies and low inflation reduced the incentives to hold land as a hedge, increased the supply of land available for sale (especially by absentee owners and by banks holding land as collateral for defaulted farm debt), and lowered its price.

Government was under strong political and social pressure to rapidly and constructively address the land distribution issue, and was looking for a viable, complementary methodology. The Bank-supported Rural Poverty Alleviation Projects in the Northeast were demonstrating the benefits of decentralized, participatory development and providing an institutional model/framework for a market-based, community-driven land reform program. Bank policies were modified to accept land purchases as counterpart, which permitted the Bank to proceed with this project.

Project objectives were appropriate in view of: (i) limited access to land and extreme inequality in land ownership being key elements of the rural poverty equation in Brazil and especially the Northeast region; (ii) research indications that under conditions of rural labor surplus family farms are more productive and labor-intensive than large farms with un-utilized or under-utilized lands, and that skewed land distribution limits agricultural productivity and employment;\* (iii) issues affecting Government-administered land reform programs using expropriation and redistribution due to delays, high costs, potential for abuse and political/social conflict; (iv) rules governing expropriation which had the effect of excluding about 40.0 million hectares which could be subject to acquisition by landless rural families under the project mechanism. The five states were selected due to the severity of landlessness; good prospects for rapid and effective project implementation; the immediate availability of land in the market; coverage of a range of natural environments representative of the Northeast; and demonstrated implementation capacity of those State Governments and their respective Technical Units, which were the same as those used under the Northeast Rural Poverty Alleviation Projects.

\* This finding is consistent with studies in other rural labor surplus economies that show significant efficiency gains in small family farms compared to large estates.

*Basic Principles.* Four basic principles govern the model: (i) *Decentralization*, drawing on the institutional/governance framework established under the Bank-financed Rural Poverty Alleviation Projects in the Northeast states, and jointly administered by State agencies and involved financial institutions; (ii) *Community-based approach*, proven to be both cost-effective and non-conflictive. Poor rural communities take the initiative (with technical assistance support

from diverse sources), selecting land, negotiating its purchase and receiving a loan for the purchase of land (*Subprojeto de Aquisição da Terra – SAT*) This method builds sustainability through the self-selection of beneficiaries and lands; (iii) *Access to investments*, through immediate financing for approved community ventures to enhance productivity (*Subprojeto de Investimento Comunitário - SIC*). Based on community decisions on priority investments and with proposals approved, funds flow directly to their associations, i.e., are deposited to the association bank account. Families also receive a start-up grant of R\$1,300 per family (about US\$440) for settlement expenses in the first year; and (iv) *Piloting and evaluation*, through innovative measures to achieve objectives, intensive study of outcomes and impact, national and international knowledge dissemination, and enhanced Bank supervision.

## 4. Achievement of Objective and Outputs

### 4.1 Outcome/achievement of objective:

Rated Satisfactory.

The CT project achieved its targets and objectives, and successfully tested a new, cost-effective and non-conflictive methodology for land re-distribution to complement traditional Government land reform programs, as verified by evaluations, special studies and intensive supervision in the project period. The primary research tools substantiating project achievements and supporting adjustments in project design were the following.

First, establishing the project evaluation platform, an initial (baseline) study in 1998/99 by the Economic Institute of the State University of Campinas, State of São Paulo, Brazil (UNICAMP) with the Ministry of Agrarian Development (MDA) and the Project Technical Unit (Center for Agrarian Studies/NEAD) conducted field research using statistically planned samples/panels of beneficiary populations of the CT. Over 50% of lands purchased at the time were surveyed, applying questionnaires to a representative sample of 222 beneficiary households to evaluate the socio-economic profile of beneficiaries, land purchases, the governance structure and implementation strategy of the five states, with results presented in several documents.\* Second, a comprehensive preliminary evaluation in 2001 by UNICAMP, MDA and NEAD conducted an expanded field survey (2000 questionnaires) including CT beneficiaries, INCRA (National Institute for Colonization and Agrarian Reform) beneficiaries of traditional agrarian reform and a control group. Data from the National Household Survey for 3,413 households sharing characteristics of the CT target population (i.e., head of household between 18 and 60 years, agricultural laborer, with household income <R\$240/month) and other official sources were also compared with CT beneficiaries to evaluate, among other things, the effectiveness of the self-selection targeting mechanism.\*\* Third, an end of project impact evaluation in 2003 by the UNICAMP team focused more tightly on project agricultural production, income and other key issues, comparing a sample of 106 CT settlement projects and 306 beneficiaries surveyed in August 2003 with the same sample projects/beneficiaries surveyed in 1998, just after initial implementation.\*\*\* A series of smaller, specialized studies (including case studies in the States of Bahia and Ceara) were completed, complemented by international and national seminars and workshops (see 4.2).

\* *Avaliação Preliminar do Cédula da Terra. Relatório Técnico* 1999a and 1999b, Buainain, Silveira, Souza Filho, Magalhaes.

\*\**Estudo de Avaliação de Impactos do Programa Cédula da Terra, 2001. Relatório Final*, July 2002 Universidade Estadual de Campinas/Núcleo de Economia Agrícola, Ministério de Desenvolvimento Agrário, Núcleo de Estudos Agrários e Desenvolvimento.

\*\*\**Estudo Final de Avaliação de Impactos do Programa Cédula da Terra. Relatório Preliminar* September 2003, Buainain, Universidade Estadual de Campinas.



**Objective 1: Increasing the incomes of about 15,000 poor rural families through improved access to land and participation in complementary, demand-driven community subprojects.**

Evaluation shows this objective was achieved. The project allocates a package of financing totaling R\$11,200 for each beneficiary family, comprising a land purchase subproject (SAT) and a community investment subproject (SIC), plus a separate R\$1,300 settlement grant. Within the combined SAT/SIC package, beneficiaries are encouraged to buy the best land for the lowest possible price, keeping in mind that the lower the land price, the greater the non-refundable or matching grant portion is for family settlement/on-farm investment.

Data was collected from a sample of 108 property acquisition projects (and as many community associations) and 313 beneficiaries surveyed in August 2003, and compared to data collected from the same sample in 1998 just after implementation started. An additional comparison was made to the results of the 2001 study. Over the period from 1998 to 2003, beneficiaries' nominal income rose by an average 180%, from R\$2,057 (typical beneficiary family) to R\$5,777, equivalent to a monthly per capita income of R\$122, significantly above the poverty line currently in use by the Federal Government, of R\$70.

Correcting these nominal income values for the increase in agricultural labor salary rates in the period, a good proxy for inflation in rural areas since it indicates the opportunity cost of labor, real income increased by 75% between 1998 and 2003 (see Tables 1 and 2). In terms of minimum salaries, average family income in 1998 was equivalent to 0.7 minimum salaries, while in 2003 it was equivalent to 2.5 monthly minimum salaries (the minimum salary applicable up to April 2003 was R\$200). This reflects a substantial increase, especially considering that the PNAD (*Pesquisa Nacional por Amostras Domiciliares*) surveys from 1999 to 2001 indicate that there was no positive change in average total family income for the rural population with similar characteristics to CT beneficiaries. Moreover, it should be noted that estimates of 1998 income already account for payments received by beneficiaries from their own associations for work performed implementing project infrastructure financed by SIC funds. Therefore, 1998 income estimates over-state what beneficiaries' income would have been at the project entry point.

**Table 1: Evolution of Nominal Income by Source (1998-2003)**

Income	Average (%)					
	Jan-Dec 1998		Aug 1999-July 2000		Aug 2002-July 2003	
Annual gross income	2,057.8	100%	2,672.3	100%	5,777.4	100%
Off-farm labor	930.8	45%	491.1	18%	394.3	7%
Agric. production	266.0	13%	1,238.8	46%	3,766.6	65%
Land rental	na	na	5.1	-	5.6	-
Other sources	860.9	42%	937.2	35%	1,610.8	28%

**Source:** UNICAMP research data.

**Table 2: Evolution of Income in Daily Rates (1998-2003)**

Income	Average (R\$)					
	Jan-Dec 98	Daily*	Aug 99-Jul 00	Daily*	Aug 02-Jul 03	Daily**
Annual gross income	2057.81	374.15	2,672.37	485.89	5,777.49	650.62
Off-farm labor	930.82	169.24	491.13	89.30	394.37	44.41
Agric. production	266.04	48.37	1,238.88	225.25	3,766.64	424.17
Land rental	na	na	5.12	0.93	5.65	0.64
Other sources	860.95	156.54	937.24	170.41	1,610.83	181.40

**Source:** UNICAMP research data

\* Average daily rate estimated for the period Jan 1998-July 2000, R\$5.50

\*\* Average daily rate estimated for the period Jan 1998 – July 2003, R\$8.88

Analysis of the *composition of household income* helps explain not only the current situation of beneficiaries but also the dynamics of the settlement projects. The comparison of income composition between 1998 and 2003 showed a significant shift towards agricultural production and away from off-farm employment. In 1998, income from agricultural production on-farm was only 13% of total household income, by 2000 it was about 45% and by 2003, on-farm production contributed 65% of total beneficiary household income. Off-farm income decreased from 45% to 7% of total income in the period. This change resulted basically from the substantial increase in agricultural production as indicated in Table 3 which shows that between 1998 and 2000 the increase in production was of the order of 360%, while between 2000 and 2003 it was 204%. This analysis indicates that beneficiaries are dedicating more time/family labor to agricultural activities on-farm and less to off-farm work, evolving towards independence from off-farm jobs. Similar poor farmers in these same regions are typically strongly dependent on off-farm income for survival.

**Table 3: Growth by Income Source (1998-2003)**

Income	Evolution	
	Jan-Dec 1998 Aug 1999 - July 2000	Aug 1999 - July 2000 Aug 2002 - July 2003
Annual gross income:	30%	116%
Off-farm labor	-47%	-20%
Agricultural production	366%	204%
land rental	na	10%
Other sources	9%	72%

**Source:** UNICAMP research data

*Monetary income* results are an important indication not only of levels of production but also of the insertion of beneficiaries in the market. Monetary income from all sources was R\$3,947.00, 68% of total income, or equivalent to about R\$324.00 per month, which is equivalent to 1.6 minimum salaries (by April 2003). Of this total monetary income, R\$3,158 is derived from agricultural production on-farm, again conveying an image evolving away from that of the traditional, small, poor farmer who is much more dependent on subsistence production. It is also important that for a substantial number of beneficiary families, only the monetary income they receive, that is, not considering consumption of own production, puts them above the poverty line. In the rural Northeast, this is especially noteworthy.

In terms of *employment*, the 2003 evaluation found that settlement projects created employment for an average 3.9 individuals per beneficiary family, of which the great majority were family members and about 3% were hired workers. Given that the sample used in the 2003 evaluation can statistically represent only the universe of subprojects implemented from 1998 on, it is not possible to extrapolate these employment estimates to the universe of project beneficiaries. However, since the projects implemented from 1998 were in general more effective in initiating productive activities at an earlier stage, a conservative estimate could reasonably be made that for the 15,267 beneficiary families, approximately 60,000 year-round occupations were being created by 2003.

*Well-being:* Of the families living on the settlement by 2003, 93% lived in houses of masonry with roofing and floors of cement; 67% had bathroom and sanitation facilities and 84% had electric power. These data indicate that improved dwelling quality associated with a family income of 2.5 minimum salaries monthly amounted to a significant improvement in overall living conditions for families who, four years earlier, were living under the poverty line with gross deficiencies in basic services/facilities. The 2003 evaluation also shows that whereas in 1998, only 25% of beneficiary families lived on their property, 23% in other locations near the property, 21% in small rural centers and 30% in urban peripheries of essentially rural towns, by 2003, 75% lived on their property, 13% in small rural centers in close proximity to the property and less than 1% in an urban setting. This is a clear indicator of consolidation and evolution within a community context.

## Objective 2: Raising the agricultural output of lands included in the project.

The project was successful in increasing the agricultural output of properties acquired. The 2003 evaluation describes the evolution of agricultural production in two forms: (i) land use on farms before CT was implemented was low, with large areas non-utilized or under-utilized, while the expansion of land use observed in 2003 was very significant; and (ii) the increase in agricultural production was substantial as indicated by its importance as a source of family income and the increase in agricultural sales. Land use on the properties acquired under CT was very low before the projects were implemented. As seen in Table 4, the majority of properties were abandoned or under-utilized.

**Table 4: Land-use of Properties Acquired under the Project (1998)\***

Item		States									
		Bahia		Ceara		Maranhao		Minas Gerais		Pernambuco	
		Incid.	%	Incid.	%	Incid.	%	Incid.	%	Incid.	%
Effic of prod.	Abandoned	6	24	7	21.9	3	18.8	3	25.0	4	22.2
	Under-utiliz.	13	52	19	59.4	10	62.5	8	66.7	11	61.1
	Well-utilized	6	24	5	18.8	3	18.8	1	8.3	3	16.7
	<b>Total:</b>	<b>25</b>	<b>100</b>	<b>32</b>	<b>100</b>	<b>16</b>	<b>100</b>	<b>12</b>	<b>100</b>	<b>18</b>	<b>100</b>

\*End-project land use figures are still being calculated by UNICAMP directly from the questionnaires applied to the associations, and will be published in the final 2003 report.

This situation improved markedly over time as a result of the project. In a substantial portion of CT projects surveyed, it was observed that there were significant investments in land preparation to expand the area cultivated, investments in livestock and in perennial crops. It can be safely stated that estimations of current agricultural production do not yet incorporate the potential output from these recent investments. The 2003 evaluation also found that the majority of farm systems visited have good potential for progressing to more complex levels as long as they can secure access to needed inputs.

Even without factoring in output from recent investments, the observed increase in agricultural production between 1998 and 2003 is substantial and indicates the markedly better use of land on the properties after settlement. Agricultural production increased 366% between 1998 and 2000 and a further 204% from 2000 to 2003. This significant increase in the level of output has taken place despite restrictions faced by farmers in relation to drought, and reduced availability of credit and technical assistance. In fact, given these restrictions it is actually more rational for farmers to use production systems that are less intensive in the use of inputs and modern technology, but more efficient to guarantee a minimal income source. These characteristics are typical of small family agricultural establishments in the Northeast and are present in the CT projects. An analysis of the efficiency of agricultural production carried out by the 2003 evaluation indicates that access to credit and regular technical assistance could significantly increase production on CT properties, irrespective of additional expansion of area cultivated.

Numerous examples were observed/recorded of innovative farming initiatives that had already

progressed well beyond traditional patterns. Without exception, all of these had one common characteristic: the presence of a dynamic association and leadership which had managed to implement associative activities with two main objectives: (i) as an employment generation strategy for beneficiaries and to achieve income sufficient to make land loan payments and make new, additional investments; and (ii) as a strategy for organizing the work of individual beneficiary families and raising their production capacity especially through mechanizing certain stages of the production cycle or for associative preparation of soils, group clearing of individuals' land, and other forms of joint farming activity.

In general, the production of beneficiaries interviewed in 2003 was still predominantly individual but associative patterns were evolving as communities consolidated, and developed types of productive activities in which investments had only recently been made such as pasture, perennial crop plantations (coffee, cacao) and cattle, which implicitly require collaboration/association for successful development. The 2003 evaluation makes the connection between associative action and higher value production based on results of an analysis of income determinants which shows significant positive impacts of collaborative and integrated actions in productive activities in general and in associative livestock production in particular.

**Objective 3: Pilot testing a market-based approach to land reform which, if successful, would enable Government to accelerate the pace and lower the cost of programs to improve land access.**

The project achieved this objective, successfully testing a new methodology bound by a governance regime already proven under the related, Bank-financed community-driven rural poverty reduction projects in the Northeast region, and demonstrating through evaluation, that the approach was cost-effective and replicable at greater scale. The pilot targeted a limited number of beneficiaries in five states expressly committed to the pilot, and with agro-climatic and socio-economic conditions representative of the broader Northeast region. Systematic evaluation, specialized studies/case studies, strong supervision and national/international seminars and workshops demonstrated quantitatively and qualitatively, that the method is a viable, complementary and non-conflictive mechanism for rapid land re-distribution without inflating land prices, with capacity to increase the productivity and income of the poorest rural families, improve family well-being, and build social capital. As a direct result, the Federal Government engaged the Bank in discussions on expanding the piloted, community-based approach to the rest of the Northeast and other parts of Brazil, specifically to 14 states including four South/Southeastern states. The follow-on Land-based Poverty Alleviation Project I (known as *Crédito Fundiário*, 7037-BR), EUR 218.2 million (US\$202.1 million equivalent), which included the principle lessons learned during implementation of the CT pilot, was effective on October 16, 2001.

*Adjustments during Implementation:* In keeping with its piloting objective, the project was adapted/adjusted during implementation on the basis of research findings, project supervision and changing circumstances, as follows:

(i) The amount allocated to TA was increased (to 8% of the on-farm investment) during land

purchase and subsequent production planning over the first three years after installation to ensure increased productivity and incomes, based on the finding that lack of systematic access to and provision of technical assistance to CT beneficiaries was a potentially binding constraint on their progress and sustainability of their properties.

(ii) The approval process for complementary on-farm investments was streamlined with the funds (including the R\$1,300 settlement grant) deposited immediately to the association bank account following land purchase and disbursed (in the case of subprojects) upon approval of the community proposal by the State Technical Unit.

(iii) A more strategic, inclusive approach was devised to train newly-formed community associations to increase organizational level, social cohesion and ability to develop their property, based on findings that community capacity for organized action was not always adequate given families' background, experiences and individuality.

(iv) Financial conditions for the land loans were retroactively adapted to those of Complementary Law 93 of 1998, with repayment and grace periods increased to 20 and 3 years respectively and a 50% rebate on the nominal interest rate for timely payment by beneficiary associations located in more difficult agro-climatic areas (e.g., semi-arid).

(v) To preserve the concept of the market-based mechanism as a complementary, not substitute instrument, the project could not sell lands legally subject to expropriation (i.e., not exceeding 15 *modulos fiscais*)\*. \*\* This had the effect of reducing the possibility of large associations bringing proposals to the STUs\*\*\*, and associations which presented proposals to buy land subject to expropriation were directed to locate other land.

\* Modulo Fiscal: Minimum efficient size of a productive holding for a family, as established by the Federal Government, and which may vary by region and agro-climatic conditions.

\*\* The original design did not exclude the possibility of purchasing lands that could be expropriated, but from 1999 on, prompted in part by events surrounding two requests for Inspection Panel investigation, no purchasing process would be initiated by CT for any property which could potentially be expropriated, and the project Operational Manual was changed accordingly.

\*\*\* Average settlement size was 15-30 families under CT and about 50-70 families under INCRA expropriation.

(vi) Differentiated SAT/SIC financing packages were introduced to account for varying circumstances, including agro-climatic, in participating states. In certain regions of the semi-arid zone, due to the need for greater investment in lower quality land characteristic of this region, and also in areas where land prices are traditionally higher due to soil and rainfall conditions (e.g., Zona da Mata), the SAT/SIC financing package was adjusted to a total of R\$14,000 per family from the usual R\$12,000, including in both cases the R\$1,300 settlement grant, (see Section 6 on sustainability in semi-arid).

*Inspection Panel.* Two requests for an investigation of the CT submitted to the Bank's Inspection Panel in December 1998 and again in September 1999, provided additional opportunity to stock-take, evaluate the project's implementation experience and specific features and make responsive adjustments. The Inspection Panel reviewed both requests, visited settled beneficiary communities and local leaders, and in May 1999 and again in December 1999, decided not to recommend an investigation of the project.

#### 4.2 Outputs by components:

##### **Land Purchase Account – US\$45.0 million (baseline cost)**

Rated Highly Satisfactory

This component included land purchases (*Subprojetos de Aquisição da Terra/SAT*) by community associations of poor farm families without land or with insufficient land to subsist, funded by loans from a land account (100% Federal Government-financed) computed as counterpart funding for the other Bank-financed components. Component costs were estimated at US\$45.0 million for about 15,000 families at an average US\$3,000 per family. By end-project, some 15,267 poor rural families had benefited (about 76,000 individuals), settling on 609 separate properties (122% of appraisal estimate) at an average cost of R\$4,984 (land only) and a total land cost of US\$45.0 million or about US\$2,950 per family.\*

\* Data provided by the Borrower shows total cost for land acquisition as US\$45.0 million, i.e., the original PAD estimate. See Project Cost and Financing section 5.5.

*Governance Framework for Land Acquisition:* The CT was decentralized, based on self-selection by beneficiaries, founded on mechanisms governing the acquisition of lands and included incentives for sound business transactions which avoided collusion. Legally-constituted associations of eligible families (as defined by program rules) buy properties directly on the open market using repayable credit. Title is delivered to the family upon full repayment of the loan.\* The implicit idea is that the final objective is the re-distribution of land, avoiding a polemic about the forms of acquisition and redistribution, and focusing on the socio-economic impact and sustainability of a new public policy. The project tested the manner in which purchase of lands in the market and transferring to communities the task of identifying and negotiating directly with their owners, could serve as a valid complementary instrument of land policy. The governance structure associated with the selection and acquisition of lands under CT is summarized as follows:

\* Community associations identify suitable lands and directly negotiate their purchase with willing sellers.

\* Community associations present to the responsible state body\* a formal declaration of the owners' willingness to sell the land to the community at a specified price and request confirmation that: (a) the title to the land is clean, and no invasion or other condition threatens the effectiveness of the land purchase; and (b) the negotiated purchase price is consistent with market conditions.

\* Communities present their land purchase project to the State Technical Unit together with a plan for community investment projects (component 2). The Technical Unit verifies the eligibility of the beneficiaries according to targeting conditions defined in the Operational Manual and approves the land purchases, usually on a first-come first serve basis.

\* With the approval of the State Technical Unit, communities are eligible for a land loan from the land account created with Federal Government budget resources and administered by the *Banco do Nordeste do Brasil* (BNB). A loan is given to the community association for the purchase

price of the land plus other purchase-related expenses such as land surveys. Loans were initially given for 10 years with three years of grace at the Government long-term interest rate (TJLP), later changed to conform to Complementary Law 93, i.e., 20 years with three years' grace and a 50% rebate on the nominal interest rate for timely payment by associations located in more difficult agro-climatic areas (e.g., semi-arid).

\* Communities decide internally on and determine by contract with the individual members the division of land among individual community members and the corresponding payment obligations.

\* In the land acquisition process, the title passes in the name of the association, and is held by the creditor bank as an operational guarantee. Once the association liquidates its debt, the property is free of the mortgage and individual titles can be created and the land sold, if desired.

\*\* Participation of State Land Institutes (SLI) occurred at different levels in each state: (i) in Maranhao, SLI involvement was limited to providing legal assistance to analyze land purchase proposals, and do topographic surveys; (ii) in Ceara, IDACE was responsible for the entire land purchase process (appraisal, legal assistance, and helping communities during the negotiation with seller); (iii) in Pernambuco, the State Department of Lands was responsible only for evaluation of properties acquired; (iv) in Bahia, CORA (Coordination for Agrarian Reform of the Agriculture Secretariat) had a more active role, handling appraisal, legal assistance, negotiation support, implementation of SICs and supervision. The STUs handled general coordination and authorized payments.

The project was launched successfully and was well-advanced towards achieving its targets within the three years estimated. By the second year, the five State Technical Units were receiving land purchase proposals representing over 4,000 families per month. However, two Inspection Panel requests (during which project activities were consciously slowed), generalized fiscal/economic crisis starting in 1998 which caused increasing shortages of resources in the national budget which in turn, limited the entry of Bank funds for the on-farm investment and other components; and, administrative difficulties in the Ministry of Agrarian Development, slowed implementation. Importantly, STUs' institutional capacity to analyze and process the massive numbers of purchase proposals received based on an innovative methodology which essentially required learning by doing, combined with the burden of processing equally large numbers of applications for complementary on-farm investments, became a limiting factor.

By state, Bahia had the best performance, benefiting 4,261 families, followed by Ceará (3,590), Maranhão (3,530), Pernambuco (2,235) and Minas Gerais (1,651). Total land acquired in the five states under 609 separate purchase events was 399,000 hectares, with an average of about 26 ha/family, an average price of R\$191/ha and average cost per family of R\$4,984 (land only). The global average cost per family increased modestly over time, due principally to the higher average cost in Pernambuco of lands acquired in the Zona da Mata region. Prices are traditionally higher due to soil quality, rainfall and proximity to the major consumer market of Recife. In the semi-arid zones, STUs evaluated land purchase proposals in light of water availability on the property/subsoil and potential to install small-scale dams, irrigation systems and other water supply facilities, and service human and animal consumption needs. The majority of properties purchased in the semi-arid region have this potential (or already have water facilities) but the speed at which they have been able to invest in its development has, not surprisingly, varied between and within States.

*Role of Banco da Terra and National Institute for Colonization and Agrarian Reform (INCRA):* Banco da Terra was the popular name adopted by the Federal Government for a Land Credit Program with national coverage. To activate it, Government created in 2000 a Land Fund to which were channeled all resources from various sources, destined for land purchases. Banco da



*Terra* had no executive role in the CT project, nor was it financed by the Bank. Resources for land purchases were allocated in the INCRA budget till 2000. From then on, the Land Fund became the source of funding for land acquisition. INCRA was also the financial manager of the CT, and budget allocations for bringing Bank resources into the project were included in the INCRA budget which, once released by Treasury, were transferred by INCRA to the five State Technical Units for project administration and for financing the SICs. The Bank of the Northeast received from INCRA funds allocated to finance land purchases, while the Bank of Brazil received from INCRA resources to finance the SICs.

*Land Prices:* Evaluations (1999 and 2001) show that the project did not exert pressure on land prices and in some states, most notably Maranhão, prices actually declined over the course of project execution. The amount of land involved was a tiny fraction of total land transacted in the region and too small to exert a significant effect on the market. The vast majority of land acquired derived from persons who had abandoned rural activities due to age, labor problems, indebtedness to banks or because the returns on farm activity were unacceptably low. In Bahia, problems with the monoculture of *cacau* and the crisis in sugar-cane in the Zona da Mata caused owners to sell out at reasonable prices.

Studies of public settlement, colonization and irrigation projects reveal that price and quality of land are the strongest factors in the success of the venture and hence the negotiation process involving the associations and sellers is especially vital. The 2001 evaluation presents a series of thoughts/findings on this process. While quality and location have been stressed in the literature as key factors of success or failure, price has infrequently been mentioned or has been minimized (mainly because under expropriation, costs are borne by government and beneficiaries who, thus far, have not actually paid for their properties). The viability, expansion and good function of the CT depended on the supply of land which could be purchased at prices compatible with program rules (i.e. the total SAT/SIC package), on land potential and on beneficiary capacity (Silveira, Buainain and Magalhães, 2000).

The total financing package for land purchase and on-farm investment per family, as previously stated, was R\$11,200 (excluding settlement grant). Obviously, a higher limit would have permitted the purchase of greater area, depending on local conditions of price and quality, or the amount available for initial investment, but this would have restricted the number of families participating and the number of properties acquired. The 2001 evaluation found that few purchases of land committed more than 60% of their total package to the SAT and a majority of beneficiaries committed far less, indicating a process of negotiation. The limit is per family, so an association may bring in more families to increase the total financing available for SAT and SIC. However, larger numbers of families per project were shown by evaluation to reduce the bargaining power of associations, introducing, among other things, an “impatience factor”; and, few properties were available to accommodate large numbers.

The evaluation also showed that, based on FGV (Fundação Getúlio Vargas) reference indices, CT projects, while distributed in all regions of the five participating states, were not concentrated in areas with high land prices. In the absence of precise market indicators, use of a “*laudo*”<sup>\*</sup> permitted verification of the consistency of the negotiated outcome with the technical and productive characteristics of the land (as set out in the *laudo*). Comparing the final price

paid/contracted and the value of the corresponding *laudo*, the evaluation revealed only minor differences between them, confirming the importance of this document and that State Governments are performing their role well as arbiters, ensuring that the associations themselves appropriate any subsidies.

\* Document verifying key characteristics of the land, and price, prepared by STU technicians.

In conclusion, the project governance mechanism introduced safeguards and incentives to reduce the likelihood of collusion and boost associations' bargaining power. The general comportment of the negotiating parties was not oriented to collusion or benefit-sharing. The seller's intrinsic lack of interest in the buyer's repayment capacity notionally introduces a moral risk to the issue of raising the financing ceiling, but buyers' obligation to repay in this case, reduced the risk of collusion. The initial price asked by the owners approximated more the average value of the market reference price (unknown to owners), than the Program "ceiling". This means that for at least the majority of purchases, the program limit was sufficient to avoid price inflation and permit purchase of properties at prices close to the market average and not the limit of funds available.

The core project strategy was intended to ensure successful, sustainable settlement. Access to a SAT was to be first-come/first-served and all states attempted to adopt this maxim. However, this did not mean that the first proposals to arrive were the first to be approved and released for funding. In some cases, negotiations were protracted, or difficulties were encountered in locating documents pertaining to the beneficiaries and/or the land for sale, or the land required specialized measurement/survey. Some proposals were set aside as a function of price, quality of the land selected and/or characteristics of the group making the proposal (e.g., level of organization and conformity with eligibility criteria). Massive demand from the outset was due to many factors, most prominently, the social pressures of landlessness, but also because no clear limit had been set at appraisal on the size of properties to be purchased. From 2000 on however, the project could only finance properties up to 15 *modulos fiscais* (see footnote, Objective 2) to delineate Project-supported activities from other existing traditional agrarian reform programs. This requirement dampened demand somewhat, mostly from very large groups, but did not compromise project objectives.

*Repayment of Land Loans:* The original terms for repayment of land loans were 10 years with three years' grace at the long-term interest rate (TJLP). These terms were subsequently changed to 20 years with three years' grace at a real rate of 6% per year, and a 50% rebate on the interest rate for timely repayment by associations in more difficult agro-climatic zones (the latter a consequence of lessons emerging from the Inspection Panel initial review process). This brought CT beneficiaries into line with the terms for repayment under the scaled-up, expanded *Crédito Fundiário* project, i.e., to avoid two separate repayment regimes operating simultaneously for the market-based program. As at December 31, 2002, repayment by associations with their first installment due, is summarized by State as follows:

**Table 6: Beneficiary Repayment of First Installments, end-2002**

<b>State</b>	<b>No. Assns. Due</b>	<b>Assns. Paid</b>	<b>% Assns. Paid</b>
Maranhão	51	42	82.3
Ceará	131	119	90.8
Pernambuco	19	10	52.6
Bahia	42	32	76.1
Minas Gerais*	-	-	-
<b>Total:</b>	<b>243</b>	<b>203</b>	<b>83.5 (aver.)**</b>

\* Lack of data for Minas Gerais is due to failure of financial institutions to revise contracts to conform to the new Complementary Law 93, as mentioned in text below. Contract revision was started in 2003.

\*\* Most of the difference in repayments in other states is also due to this bureaucratic roadblock.

That about 84% of all associations with first payments due actually paid and on time, is significant in light of the comparatively low level of capitalization, formal training and management skills of project beneficiaries, and location of a significant portion of CT settlements in semi-arid areas, which experienced a serious drought in the 1999-2000 period (and again in 2002/2003). Those who delayed payment were naturally affected by these same conditions, but the most important obstacle affecting families' ability to pay on time was bureaucratic delays associated with the retroactive adaptation of initial land loan terms and conditions to the new terms resulting from passage of Complementary Law 93.

The system/process for repayment of the land loan was the same for all five states. The debt pertained to the association, no family could make an individual payment. Should a family renege on its contract to purchase the land, the association generally arranged for a substitution (formally presented to the STU/financial institution) or alternatively, it might be decided that remaining families assume the debt and formalize this with the STU/financial institution. Beneficiaries' capacity to generate sufficient cash income to both service the debt on their land loans and continue to accumulate assets for future farm improvements is a crucial aspect of project sustainability. Evaluation results indicate that, when all monetary income is considered, (i.e., cash income from agricultural production, off-farm employment and other sources), project beneficiaries have sufficient resources to make their loan payments, which range from R\$300 per year in the Semi-Arid to R\$650 in the Zona da Mata, and to increase their asset base from agricultural production on land acquired under the project (see also Annex 3).

### **Community Subprojects – US\$84.3 million (baseline cost)**

Rated Satisfactory

Community associations which acquired land were eligible to present to the STU proposals to finance complementary community subprojects and technical assistance (*Subprojetos de Investimentos Comunitarios/SIC*) intended to boost on-farm productivity and income. Subproject selection was demand-driven with a short negative list of ineligible investments. Proposals used standard documentation and technical, economic, environmental and sustainability criteria established in the Project Operational Manual. The STU appraised proposals based on these parameters and financial agents disbursed grant funds for execution of the subproject. The SIC were effected through matching grants for small-scale investments – classified broadly as infrastructure, productive and social - identified by settled communities as priorities.

Beneficiaries were obligated to contribute to the investment in cash and/or kind (minimum 10% of subproject value), and be responsible for operation and maintenance, including by establishing user funds, essentially the same requirement as the Bank-financed, community-driven Northeast rural poverty reduction projects. Each community had the option of directing up to 8% (incremental) of the cost of their on-farm subproject to technical assistance.

\* Infrastructure: e.g., rural water supply, electricity and local access roads; Productive: e.g., small-scale agro-processing, communal tractors, minor irrigation schemes, purchase of breeding animals, *campo agrícola*; Social: e.g., crèches, school and health post rehabilitation.

The project financed 2,965 SIC investments, 119% of the appraisal target (2,500), to upgrade basic economic and social services and enhance productive potential. Demand for SICs was, as a complement to land purchase proposals, exceptionally strong and in the initial years, subject to processing delays which stemmed from the sheer volume of demand and insufficient technical and administrative capacity in STUs to manage it (as mentioned, the STUs were also administering their respective rural poverty reduction projects). Further, reduced Federal budget allocations under a deepening budget crisis affected the entry of Bank funds for SICs. Final cost for this component was US\$66.4 million. The overall limit per family “package” (land plus on-farm investment or SAT+SIC) was R\$11,200 in the PAD. The R\$1,300 settlement grant was separate from the SAT/SIC package. When the project was negotiated US\$1.00 was worth R\$1.04 but by December 2002 it had risen to R\$3.53 due to precipitous devaluation, but land prices remained largely stable with only minor variations in each state (except Pernambuco where prices are significantly higher as a function of purchases in the expensive Zona da Mata). Because of this situation, the project continued to work with the values established in the PAD. Only in the second part of 2000, when around 70% of the project target had been achieved, were the values adapted to a rate equivalent to R\$1.80/US\$1.00 as a function of increased prices of inputs and to compensate for the higher prices of lands in some regions.

Originally, the SIC was planned to serve as funding for settling-in, on-farm infrastructure, while PROCERA/PRONAF-A would be used for productive investments. However, as PROCERA was not accessed (see below on credit) and PRONAF-A was under-utilized due to bureaucratic and other impediments to beneficiary access, the SIC became in many cases, the only source of financing for productive investments as well. However, the amount available was insufficient for both infrastructure needs and for productive investments which imposed a limitation on many beneficiaries but especially those in semi-arid areas requiring significant investment to counter agro-climatic conditions and improve income from marketable/commercial production. SICs were used for a wide variety of investments but most commonly for electricity and water supply installation (both essential for productive activities, as demonstrated under the Northeast rural poverty projects), communal tractors and equipment, various types of small-scale agro-processing facilities, the purchase of livestock (cattle and goats), and housing construction.

*Credit.* Prompt and adequate access to credit to sustain and build on the benefits of initial on-farm investments, is important to the establishment and sustainability of CT lands. The evaluation in 2001 found that only 6% of all families interviewed had accessed credit in the 5 years prior to participation in the CT. Updated information shows that a larger percentage of beneficiary families had received credit (PRONAF-A) through end-project, but it also shows that the majority of beneficiaries still had problems with obtaining credit. Serious, protracted drought

was probably an important underlying reason for reluctance to lend to CT families in this period, especially in semi-arid areas, but bureaucratic (e.g., lack of coordination between the release of PRONAF-A funds and the season when it was most needed; release of credit in installments, affecting farmers' planting schedule and continuity of production) and budget constraints in a time of general fiscal crisis were equally, if not more, important.

It was understood (and agreed with Government) at the outset that CT beneficiaries would have access to PROCERA credit, designed specifically for agrarian reform areas, with low interest rates and a 50% rebate on interest and principal. In 1998, INCRA publicly announced that CT beneficiaries were eligible and defined the amount of funds available. The States moved to ensure accreditation for CT beneficiaries with INCRA regional offices. With credit proposals under preparation by the States, the Federal Government changed its agricultural credit policy for agrarian reform families, eliminating PROCERA and assigning all small producers including land reform beneficiaries, to the PRONAF-A credit program. Regulations were delayed and a decree limiting CT beneficiaries to working capital not to exceed US\$1,300 equivalent required Bank intervention, working with the States and the participating Banks of Brazil and the Northeast. The current amount is R\$3,500. Most recipient families obtained working capital in Year 1 and investment capital in Year 2. The supply of PRONAF credit remained modest through end-project despite agreements with the States and support from the Ministry of Agrarian Development, chiefly due to the economic situation, but more recently, availability has improved.\*

\* Government's budget for PRONAF-A country-wide in 2002 was about R\$2.3 billion, but the new Government has announced an increase to some R\$5.4 billion for 2003, improving the credit prospects for many agrarian reform beneficiaries.

**Table 7A: Aggregate Final Results, 1998-2002**

States	No. projects	Area (ha)	No. Families	Value of Property (R\$)-SAT	Value of Investments (R\$) - SIC	Total R\$
Maranhão	124	91,353	3,530	11,709,490	30,702,449	42,411,939
Ceará	226	142,901	3,590	20,270,890	20,562,844	40,833,734
Pernambuco	100	41,365	2,235	15,929,269	11,698,435	27,618,704
Bahia	111	84,257	4,261	20,201,125	30,895,464	51,096,598
Minas Gerais	48	38,856	1,651	7,993,805	12,875,121	20,868,926
<b>TOTAL</b>	<b>609</b>	<b>398,732</b>	<b>15,267</b>	<b>76,095,579</b>	<b>105,978.129</b>	<b>182,829,901</b>

Source: Participating States

**Table 7B: Aggregate Final Results, 1998-2002**

States	Total R\$/Family	SAT/Family R\$	SIC/Family R\$	Average Ha/Family	Price of Land R\$/ha
Maranhao	12,014	3,317	8,697	25.8	128.17
Ceara	11,374	5,646	5,727	39.8	141.85
Pernambuco	12,357	7,123	5,234	18.5	384.87
Bahia	11,991	4,740	7,250	19.8	239.75
Minas Gerais	12,640	4,841	7,798	23.5	205.72
<b>TOTAL</b>	<b>11,975</b>	<b>4,984</b>	<b>6,941</b>	<b>26.1</b>	<b>190.84</b>

Source: Participating States

### **Community Development Support, Technical Assistance and Training – US\$3.5 million (baseline cost)**

Rated Satisfactory

This component supported strengthening the effectiveness and quality of project operations, financing technical assistance, seminars and training courses for community associations, project information dissemination campaigns to promote awareness, transparency and participation. The final cost of this component was US\$2.6 million. Selected aspects of this component are discussed below.

The critical importance of technical assistance (TA), especially in the first two years, was recognized in project design and funds were provided to finance its delivery. STUs rapidly became aware in the first year or so, of the low organizational level of many associations and its negative effects on settlement and land development prospects. Public technical assistance services were variable in quality and quantity and were, with some exceptions including EMATER (State Agricultural Extension Agency) in Ceará and Maranhão, unequipped technically or logistically to provide the regular attention required. Most families surveyed in 2001 put significant emphasis on technical assistance from local technicians, exchanges of information at association meetings, and experiences of neighbors rather than formal public authorities or firms in the initial period. About 50% of beneficiaries surveyed in 2001 had received technical assistance in the previous year and this number is expected to have risen significantly through end-project, especially given enhanced arrangements to improve TA availability/provision.

The STUs had a critical role in assisting associations to contract technical assistance and in a generally more strategic approach from 2000 onwards, amounts allocated for associations to contract TA were increased during the land purchase process and subsequent production planning over the first three years after installation of families on-land. Associations were given the option of using up to 8% of the value of their on-land investment for TA services, comprising > 4% for initial TA for project preparation, and the balance for production assistance in the first three years of settlement. Associations could also contract specific, specialized TA for investment subprojects and specific types of farming activities, and the STUs facilitated this process. The five STUs organized a total 95 formal mass training events for community leaders covering subjects such as public policies and programs, organization, financial administration, environmental issues and associative action. In addition numerous meetings took place over the project period

between STU technical staff in the field and community associations, dealing with a wide range of subjects of direct practical application to families' social and economic development on-farm. The STUs themselves received training in financial management, technical aspects of project execution, monitoring techniques and community mobilization/organization.

**State Project Administration, Supervision and Monitoring – US\$9.2 million (baseline cost)**  
Rated Satisfactory

This component supported overall project coordination, supervision, monitoring, and the incremental operating costs of the STUs for project coordination, reporting and physical performance reviews. STUs were responsible for project dissemination activities, training of beneficiaries, analysis of land purchase proposals including obtaining the legal opinion on project documentation, physical assessment of the properties involved, analysis of the SIC on-farm investment proposals, guidance to communities on the purchasing of goods and services, contracting of technical assistance, and submission of accounts, management and technical training for beneficiaries, and guidance on preparing credit proposals and interacting with financial agents. The Management Information System (MIS) and training of operational staff were completed in 2000. Final cost of the component was US\$2.1 million, well under original estimates due importantly to the effects of devaluation, but also to delayed financing to states as a result of shortages of general budget funds to draw Bank loan resources into the project.

**Federal Project Evaluation and Dissemination – US\$6.0 million (baseline cost)**  
Rated Highly Satisfactory

The Federal Government, through the Ministry of Agrarian Reform's Center for Agrarian Studies (NEAD), was responsible for project impact evaluation, studies and dissemination of experiences, and for evaluating *ex ante* the possible expansion of the pilot approach if judged successful (see also 7.5). Innovative and proactive approaches to evaluation, monitoring and research dissemination by the Borrower and intensive supervision by the Bank resulted in a significant body of research findings, lessons and data which, inter alia, provided the basis for adjustments to the project and for the preparation of the follow-on *Credito Fundiario* project. The estimated cost was US\$6.0 million and final cost at Closing, US\$5.2 million.

As detailed in 4.2, this component financed (i) an initial baseline study in 1998/99 by UNICAMP with MDA and NEAD; (ii) a preliminary evaluation in 2001; (iii) an end of project impact evaluation in 2003; (iv) case studies of project impact in the States of Bahia and Ceara; (v) a series of studies on special topics; (vi) seminars, workshops and other activities to disseminate the project.

The following lists the research financed under NEAD's oversight:

Study	Author(s)
1. Evaluation of Impact of the <i>Cedula da Terra</i> Program, 2003	State University of Campinas (UNICAMP), São Paulo, Brazil 2003
2. Prelim. Evaluation of Impact of the <i>Cedula da Terra</i> Program	UNICAMP, Ministry of Agrarian Development/NEAD 2001
3. Evaluation of Cedula da Terra in States of Bahia and Ceará	UNICAMP et al. 1999
4. Project Baseline Study	UNICAMP et al. 1999
5. Land Reform Policy Options	Buainain et al. 1998
6. Rural Land Prices and Impact of the <i>Cedula da Terra</i>	Reydon and Plata 1998
7. Social Relations on Land Reform Settlements	Martins de Carvalho 1998
8. Socio-economic Profile of <i>Cedula da Terra</i> Beneficiaries	Souza Filho et al. 1999
9. Demand for Land Access in Brazil	David 1999
10. Agrarian Reform and Development of Family Agriculture	Gomes et al. 1999
11. Financial Options for Land Reform	Troster 1998
12. Evaluation of <i>Cedula da Terra</i> in Bahia	Garcia Filho et al. 1998
13. Case Studies of RPAP-Ceará Pilot Land Reform Component	Daniilo 1998
14. Social Dimensions of the <i>Cedula da Terra</i> Project	Navarro 1998
15. Technical Assistance for Land Reform Settlements	Lopes 2000
16. Small-scale Agriculture in Brazil	DIPES/IPEA 2000
17. Regional Impacts of Land Reform	REDES 2000

In addition to studies, four seminars discussed implementation of the CT. First, an international conference in July 1998 jointly sponsored by the Ministry of Agrarian Reform and the Bank discussed the theoretical foundations linking wealth distribution, poverty and growth, as well as empirical evidence from and experiences with land reform in various countries. Second, the MDA sponsored (with the State of Ceará, Banco do Nordeste and the Inter-American Institute for Cooperation in Agriculture (IICA) in November 1998, a seminar on "Agrarian Reform and Sustainable Development" with broad participation of NGOs, government agencies and the Bank. Third, a Bank-sponsored workshop attended by the National Confederation of Rural Workers (CONTAG), leading Northeast rural development NGOs, church agencies, Rural Poverty Alleviation Program (RPAP) technical personnel and Bank staff, explored ways to leverage greater participation by certain sectors (state rural worker federations and NGOs) in the CT and the ongoing Northeast rural poverty projects. Finally, participating states and the Bank held a seminar to review and discuss preliminary findings of the first UNICAMP evaluation. The study looked at the beneficiary selection process, characteristics of CT settlements, and their economic and financial viability. This evaluation strategy resulted in a set of findings and lessons which prompted modifications to the ongoing CT and design changes to the follow-on *Crédito Fundiário* project.

*Targeting and Participation:* The evaluation program and special studies produced important findings on targeting, participation and well-being under the CT.

*Targeting:* Results of studies (Buainain 1999a and 1999b, UNICAMP 2001 and 2003) demonstrate that the project, through its self-selection strategy, attracted families with the intended socio-economic profile. Leakage to non-poor groups was minimal. Average beneficiary



household income at entry was US\$92 (about R\$240). Some 32% of beneficiaries overall were illiterate (and about 50% in the first cohort entering the program in 1998), while a further 47% had completed no more than 4th grade. Data revealed that CT beneficiaries had lower overall asset ownership, larger household density and poorer quality housing at the outset relative to a control group of households with similar socio-economic standing (Buainain: 1999b). Most beneficiaries were previously tenants or share-croppers (working in some cases, the same land eventually purchased under the project), and most had some farming experience. About 90% had worked in the rural sector prior to becoming CT beneficiaries. The term “entrepreneurial poor” best describes the product of the self-selection process.

The 2001 evaluation (UNICAMP) looked at the geographic distribution of CT settlements, confirming that they are located in municipalities with very low IDH\* with a high proportion <0.50. Based on the pre-selection criterion that family income should not exceed R\$240/month (about US\$92) the evaluation also concluded that beneficiaries were among the poorest of the rural population. Clearly, the selection process has leaned towards a group of families who do not/cannot find work in their place of origin, especially because they do not have land to “fix” their location and migration is a survival tactic. These families acquire certain life experiences from migration that contribute positively to the sustainability of the settlement.

\* United Nations Index of Human Development

Of major importance however, both as a targeting and a sustainability issue, the 2001 evaluation compared the profiles of program entrants in 1998 and 2001, noting that while still well within the poverty targeting parameters of the project, and with the overall cohort still a wide mix of histories and aptitudes, many entrants by 2001 tended to be of higher caliber - more organized, more motivated, more frequently from the same community (indicating active mobilization activities), with greater agricultural experience and slightly better-educated. Evaluation revealed that the drought of 1999 had the effect of driving desperately poor people into the project so that the project became, to some extent, and to some families, a way to deal with drought.

The majority of beneficiaries originated from small agglomerations/centers and had agricultural activities as their main occupation. The evaluation found that families living in small groupings had better prospects for participation than those purely “rural” because living in such areas equates with better access to information about programs, generally better organization and more intensive participation in social bodies involved in land access issues. Beneficiaries had had more life experiences desirable for successful settlement, tended to have more dependent children <14, demonstrating the program’s high social impact, and an overall higher average education level (due to children’s access to improved primary education, since the family head generally showed low educational attainment). Looking at state characteristics, in Ceará, selection was more intense in rural villages, beneficiaries tended to have less experience with migration and were more tightly connected to their communities. In Bahia and Minas Gerais, a greater proportion of beneficiaries were from the peripheral areas of dispersed, small urban centers considered rural .

*Civil Society Participation:* The community associations were the front-line civil society entities under the project, essentially responsible for project execution under the community-driven methodology. The Federal Government through NEAD and the Bank looked for openings to

expand civil society inclusion from the start. Involvement of other entities in key support roles increased markedly from 2000 onward due in part a major strategic effort by STUs in collaboration with the Bank, to leverage broader participation across a range of activities, in keeping with a strong push to institutionalize transparency in all stages of project execution. By end-2002 this effort had produced significant results, with a diverse cohort of private organizations and bodies supporting the project, with some variations between participating States. The project had always had strong support from the local federations/syndicates of agricultural workers. The follow-up to CT, the Land-based Poverty Alleviation Project I (Loan 7037-BR, *Crédito Fundiário*) established as a design feature, a strong partnership with the National Confederation of Agricultural Workers (CONTAG) which has a formal role in project implementation (with spillover effects on the then-ongoing CT project).

*Women's participation:* While women undoubtedly benefit in many ways from land access programs and especially, in the case of CT, from on-farm investments in water supply, electricity and many other types of investments, the vast majority of direct beneficiaries of land purchase were male. While it was intended that women participate and no restriction limited this, State studies show women's direct participation was about 8%. The level has already increased under *Crédito Fundiário* project (Loan 7037-BR) as a result of efforts by the Bank, STUs and CONTAG who are working to promote women's direct participation (i.e., as land owners). Possible reasons for low direct participation are: (i) female-headed households are among the poorest of the poor and possibly not overtly within the "entrepreneurial poor" self-selected for participation; and, in a project where demand for participation greatly outstrips supply, traditional attitudes prevailed. The potential significance of their modest representation among direct beneficiaries might be gauged from the 2001 evaluation finding that being a female-headed beneficiary family correlated closely with greater chance of increasing family income under the project.

\* See Decentralized Rural Development, Enhanced Community Participation and Local Government Performance: Evidence from Northeast Brazil, van Zyl, Sonn and Costa, July 2000; and An Assessment of Community Participation, Costa, Bank/FAO, 1999.

#### 4.3 *Net Present Value/Economic rate of return:*

The economic and financial analyses of the project are based on three family farm types implemented in the project area. The *semi-arid* represents farms in the interior of the Northeast (known as the *Sertão*) in the States of Ceará, Bahia, Pernambuco and Minas Gerais; the *Zona da Mata* depicts farms in the coastal zone with generally better soil and rainfall conditions; and the *Meio Norte* represents farms in the transition area between the Northeast region (semi-arid and *Zona da Mata*) and the Amazon, mainly incorporating the participating State of Maranhão. The analysis draws on actual individual crop budgets and herd data. Crop yields and associated cropping patterns are taken from a follow-up evaluation of project beneficiaries in July/August 2003. A set of assumptions and facts underlies the analysis (see Annex 3 and UNICAMP, 2003).

*Economic* rates of return (ERR) were 21% in the *Semi-arid* (where agro-climatic conditions are the most challenging) to 27% in the *Meio Norte* and 55% for the more favorable *Zona da Mata*. The overall ERR for the Project was 25%.

#### *4.4 Financial rate of return:*

*Financial* rates of return were 22% in the semi-arid, 51% in the Meio Norte and 35% in the Zona da Mata (with higher initial cost of investment in land).

*Fiscal Impact:* According to data in the Project Appraisal Document (PAD) of April 1997, the average estimated cost (nationwide) to settle a family under the traditional process of Government-administered expropriation was US\$16,400, while the average estimated cost under the Project was US\$8,600. The cost of traditional agrarian reform in the Northeast region 1995-2002 averaged US\$14,430 per family, using Federal Government estimates.\* In comparison, the actual average cost per CT family in the period 1998-2002 was about US\$12,800.\*\* The Project thus represented total savings to Government of some US\$25.0 million.

\* See *Ainda Sobre a Reforma Agraria*, Romeiro and Buainain in Instituto de Economia, January 2003.

\*\* For comparison purposes, an estimated allocation of PROCERA credit is included in both figures.

#### *4.5 Institutional development impact:*

The beneficiary associations are the crucial institutional element of the project methodology and most important local determinant of its success and sustainability. Institutional/social capital improvements were an implied project objective. The activities associated with forming an association, identifying areas for possible purchase, negotiating with landowners, identifying investments to enhance the property, planning the agricultural use of the property, executing the on-farm investment, contracting firms for specific purposes, abiding by procurement rules for acquiring goods and services needed for the project, applying for credit from financial agents are, in tandem with the learning framework provided by the STU, NGOs, churches and private firms, of enormous importance to the capacity and socio-economic evolution of beneficiary communities. Moreover, the 2003 evaluation team noted during field surveys that many beneficiary associations formed specifically for the purpose of participating in the project were now undergoing a renovation of leadership, a promising indicator of institutional sustainability and social capital formation. The institutional impact on communities of the participatory governance model is treated in detail in several studies associated with the Northeast rural poverty reduction projects, which apply a similar community-based methodology for the formulation, execution, operation and maintenance of essential investments.\*

\* See *Can Community-driven Infrastructure Programs contribute to Social Capital? Findings from the Rural Northeast of Brazil*. Ryan and Costa, May 12, 2003.

## **5. Major Factors Affecting Implementation and Outcome**

### *5.1 Factors outside the control of government or implementing agency:*

Two factors affecting the project were beyond Government's control: the serious drought in the Northeast states in 1999-2000, affecting among other things, the ability of newly-settled families in the semi-arid region in particular, to commence and sustain productive activity. Observations of this impact prompted STUs to withhold approval of new land purchase proposals lacking provisions for secure water supply. Another factor not directly controllable by authorities was the global economic crisis of the late 1990s and the financial collapse of Argentina which had major

spillover effects in other Latin American economies and contributed to Brazil's sharp financial downturn. Finally, there was strong opposition to the project strategy from social movements supporting traditional land reform programs, resulting in two successive requests for a Bank Inspection Panel investigation, which, while they were not accepted by the Panel, caused a marked (deliberate) slowdown in project execution.

### *5.2 Factors generally subject to government control:*

Principal issues affecting project execution and subject to Government control (direct and indirect) included the following:

- (i) Due to the generalized fiscal crisis, from 1999 to 2000, the project suffered deficits of general budget resources permitting the entry of Bank Loan funds. This caused interruptions to the flow of funds to the States for the SICs at a period of very high demand for processing of on-farm investments, and for institutional development activities, project administration and supervision as well, disrupting the continuity of project execution. Similarly, with the creation of the Land Fund in 2000, from which all project counterpart funding for land purchases was subsequently to be sourced, there were also delays in the flow of funds due to administrative and bureaucratic issues. Issues also arose over the Federal Government's policy of transferring equal funding to all five states for SICs, causing shortages of SIC resources in those states moving ahead faster on land purchases. The SIC financing situation was resolved in large part by streamlining the SIC approval process and by depositing SIC funds immediately to an association's bank account upon completion of land purchase, to be drawn-upon once on-farm investment proposals were approved by the STU.
- (ii) Changed Federal agricultural credit policies for agrarian reform beneficiaries saw the elimination of the PROCERA credit line, originally intended to benefit CT beneficiaries, and slow adjustment of PRONAF-A regulations to accept CT families, limiting the delivery of a key input for improving farm productivity.
- (iii) Lack of a fully-staffed national technical unit (NTU) until 2000 (actually established as a design feature of *Crédito Fundiário*) meant NEAD was responsible for all aspects of project coordination, monitoring, evaluation, studies and dissemination without the needed physical and human resources, and caused delays in the systematic training of STUs in project norms/rules.
- (iv) Once Land Fund resources began to be used as Federal counterpart funding, bringing that institution into the project administrative equation, the resulting duplicative and excessive coordination structure and bureaucracy slowed project execution, especially in 2000/2001.
- (v) Operational involvement of the Bank of the Northeast and Bank of Brazil in the project was impeded by the need for each bank to adapt its own internal operating norms to the requirements of the CT Loan Agreement.

### *5.3 Factors generally subject to implementing agency control:*

The project was Federally-financed, coordinated and evaluated but day to day execution of both

the land purchase and on-farm investment activities rested with the State Technical Units. While not entirely within their control, a situation rapidly arose where the pressure of demand for processing of both land purchase proposals and on-farm investment proposals, overwhelmed STU capacity and markedly slowed the project. STUs were simultaneously administering/supervising the Bank-financed Northeast rural poverty reduction projects, resulting in bureaucratic back-ups which affected processing of SICs.

Various issues impacted the project at the level of the States, directly or indirectly as a result of deficiencies within the STUs and/or difficult situations which took STUs (and the Bank) time to resolve in the context of a totally new methodology, including the following: (i) STU teams launched project activities with insufficient technical personnel and resources for field work (given simultaneous field supervision requirements of the rural poverty projects), aging computer technology and systems, and initial difficulties in establishing dynamic partnerships with social movements/NGOs to leverage greater support for project implementation; (ii) STUs experienced difficulties in securing smooth performance of the involved financial institutions (Bank of Brazil, Bank of the Northeast) due to bureaucratic hurdles involving compatibility between financial provisions of the Loan Agreement and those banks' internal regulations; (iii) in several states, there was initial lack of involvement of Municipal Governments and need for STUs to even more proactively divulge information about the project and work with local authorities; (iv) there was a tendency within some STUs to establish plans for SIC funding involving PROCERA and subsequently PRONAF-A credit funds whose availability, for reasons previously explained, was not guaranteed; and (v) issues affecting the beneficiary associations including initial slow progress in establishing systematic provision of technical assistance.

#### *5.4 Costs and financing:*

The PAD foresaw a total project cost of US\$150.0 million with a Bank Loan of US\$90.0 million and Borrower contribution of US\$45.0 million, State Government contribution of US\$6.6 million and US\$8.4 million from beneficiary associations. By Closing, total project cost was US\$121.3 million with Government's share US\$45.0 million as planned, the five States contributing US\$1.9 million, beneficiary associations US\$5.9 million and the Bank US\$68.5 million (see Annex 2). Sharp devaluation of the Real over the project period permitted the project to achieve its targets at reduced cost. Further, the roll-out of the new *Crédito Fundiário* project with enhanced design reflecting the many lessons of CT, and the fact that CT targets had been achieved, prompted Government to request cancellation of the remaining Loan balance of US\$21.4 million. The Closing Date was extended twice (to permit completion of certain activities and additional disbursement of the Loan), to June 30, 2002 and again to December 31, 2002. The amount of US\$800,000 was reallocated from Category 5 Unallocated, to Category 3 Consultant's Services under Part E (Project Evaluation and Dissemination at the Borrower's Level). The reallocated funds financed, under the coordination of the Center for Agrarian Studies (NEAD), a communications strategy and the monitoring, evaluation and integration of Federal and State Government mechanisms to alleviate the impact of drought in participating Northeast states.

Audit performance was consistently good. Audits were high quality, delivered on time and uniformly rated Unqualified for the Project Accounts, Statements of Expenditure and Special Account.

## 6. Sustainability

### *6.1 Rationale for sustainability rating:*

Sustainability is rated Likely for the following reasons:

(i) The governance framework permits a high degree of community participation in the land purchase process and in the identification, preparation, implementation and supervision of on-farm subprojects which fosters ownership and social capital development. The framework also provides penalties and incentives for quality performance. Self-selection for participation promotes motivated beneficiaries committed to successful settlement and land loan repayment (as shown by payment levels for first installments). Cost-sharing by community associations has been proven under the Bank-financed rural poverty projects, to boost the sustainability of subproject benefits.

(ii) Beneficiaries' social capital is an important sustainability factor. CT beneficiaries were found by the 2001 evaluation to be of a higher caliber, with more agricultural experience than the average poor rural person eligible to apply, more frequently with a history of migration (seen as an indicator of entrepreneurial capacity), better-organized, more frequently from the same community and slightly better-educated. An especially promising finding is that the great majority of beneficiaries are relatively young, with the time available to establish fully operating agricultural production units. Further, the 2003 evaluation noted a process of turnover in association leadership. Most associations were created specifically to comply with eligibility requirements for participation in the project and thus the renovation of leadership is regarded as a strong indication of increased social capital and institutional vitality of associations and suggests a longer-term perspective on the part of member families.

(iii) The financial and economic sustainability of family farms is positive (see Annex 3) The 2003 evaluation includes a sustainability analysis (Chapter 8), based on farm models in the main agro-ecological zones. With the exception of the semi-arid farm model with no irrigation and small area (as distinct from semi-arid properties with irrigation and larger area), all models indicate sustainable production and above poverty line income. Productive sustainability is also bolstered by the fact that family income from on-farm activities has gone from 13% of total income in 1998 to 65% in 2003, an indication that productive activity has been continuously increasing despite deficiencies in access to credit and technical assistance. The major part of agricultural income so far has been annual/short cycle and the impact of recent investments is still potential. Further, about one-third of all farmers use chemical fertilizers and 40% use anti-disease agents, but these percentages have been growing. New national agricultural credit policies/programs give priority to agrarian reform beneficiaries and are well-funded. All five CT states are included in the new Land-based Poverty Alleviation Project and thus stand to benefit from increasingly better-organized and accessible technical assistance, and a process of normalization of access to Government's recently-announced increased volumes of PRONAF-A credit for working and investment credit.



## *6.2 Transition arrangement to regular operations:*

Transition arrangements to regular operations essentially involve the process described earlier. Following land purchase and settlement, beneficiary families are eligible for financing of basic productive and social infrastructure, both through the SIC and other programs including, in all CT states except Minas Gerais, the Bank-supported rural poverty projects. On-farm investment subprojects are executed, released to the community association, which technically and legally own the investments, and become operational under certain operation and maintenance guidelines/agreements.

## **7. Bank and Borrower Performance**

### **Bank**

#### *7.1 Lending:*

The Bank's performance during identification, preparation and appraisal is rated fully Satisfactory. The origins of the Bank's engagement with this innovative methodology are set out in Section 3 along with the rationale for a QAG Best Practice rating for quality at entry. Project concept, design and strategy were rooted firmly in the following: (i) the lessons of global experience; (ii) successful experiences with participatory, demand-driven and adaptable mechanisms for rural poverty alleviation in the targeted region; (iii) exceptionally strong demand from Brazilian Federal and State Governments looking for cost-effective and non-conflictive complementary mechanisms for land re-distribution; (iv) level of pent-up demand from poor, landless rural families; and, (v) strong conviction in the Regional Vice-Presidency that the timing and implementing environment were right to effectively insert the Bank as honest broker into a traditionally controversial activity. Successfully piloting the mechanism within the Ceará Rural Poverty Alleviation Project (Loan 3918-BR) provided the impetus and justification for scaling up to the five participating states.

#### *7.2 Supervision:*

Bank supervision is rated Satisfactory. Supervision was intensive, regular, responsive to arising issues affecting project execution, and carried out by staff in the Bank's Recife and Brasilia offices as well as through regular supervision missions from Washington. Visits to participating states included staff from the Federal Ministry responsible (Special Ministry for Land Policy – MEPP, subsequently the Ministry of Agrarian Development – MDA), and the project Technical Unit (NEAD). Bank supervision staff made about 60 visits to the states in the course of implementation for supervision, troubleshooting, providing expert guidance to visiting foreign officials, and representing both the Bank and the methodology itself in public forums including national and international seminars and workshops.

About 140 staff-weeks were required for formal supervision missions. Project execution benefited from stable Bank task management for the duration. The advantages of the Bank's Recife Office in terms of proximity, experienced Task Managers and administrative personnel,

long-standing relationships with State and Federal authorities and knowledge of the community-driven mechanisms and their evolution in the Northeast, were evident. Issues were complex in an evolving, innovative operation and supervision worked actively to promote proper evaluation and continuous incorporation of lessons through adaptation of design and administrative features. The project was correctly rated Satisfactory throughout, for Development Objectives and Implementation Progress.

### *7.3 Overall Bank performance:*

Rated Satisfactory

### **Borrower**

#### *7.4 Preparation:*

For Government, the community-based approach to land reform provided a cost-effective means of responding rapidly to the politically and socially challenging demands of the landless rural poor for increased access to land, while complementing traditional mechanisms in an administratively simpler and less conflictive way. The project was prepared/designed in close contact with the Minister of Agrarian Reform, who personally promoted the pilot in the Northeast. The Governors of participating Northeast states firmly endorsed the project concept. In early 1996, Government upgraded sector institutions, designated a Federal Minister for Agrarian Reform and increased the budget for the overall Federal land reform program (from US\$1.3 billion in 1995 to US\$2.6 billion in 1997). Subsequently, following project Effectiveness, new Federal legislation increased the taxation of non-productive holdings, making additional resources available to sustain agrarian reform activities/programs.

#### *7.5 Government implementation performance:*

*Government Implementation Performance:* The Federal Government was always committed to this project, which benefited during its preparation, launching and execution from the strong personal support of the Minister for Land Policy and subsequently, from the Minister for Agrarian Development following changes in institutional responsibilities. As stated in 5.2, for about half the project period, Government had difficulty providing resources from the general budget to permit the inflow to the project of Bank loan funds. Even so, resources provided were sufficient for the project to rapidly achieve its targeted 15,000 beneficiaries, slightly exceeding this figure. Government was consistently committed to providing counterpart funding for the land purchase component which was 100% financed from Government resources.

The evolution of this commitment was demonstrated by Government's proposing in 1999, well before closing of CT, a significant scale-up of the market-based program to 14 states, including four outside the Northeast region, using the same strategy as CT with a total cost of EUR 436.4 million and a Loan of EUR 218.2 million (US\$201.1 million equivalent), benefiting 50,000 families over four years. Government's strategy was to use this opportunity to incorporate all critical lessons learned at that time, into an expanded operation rather than attempt to make extensive changes to the CT. Once the CT reached its targeted number of beneficiaries, Government decided to close it and cancel the Loan balance (US\$21.4 million), rather than continue with two projects of similar design, objectives, terms and conditions under implementation simultaneously.



### *7.6 Implementing Agency:*

*Center for Agrarian Studies (NEAD):* The project was managed by NEAD, established in 1997 within the cabinet of the Minister Extraordinary for Land Policy (MEPF). NEAD's principal intended function was to assist that cabinet, contributing to the preparation and improvement of Government land policies, as well as generating studies and research to support this function. Its responsibilities in practice were much broader. The technical and administrative staff of NEAD was always small and the unit carried out a full range of tasks including project coordination, training and assistance to participating states, as well as evaluation/studies and project monitoring, mainly by contracting consultant support. Coordination of CT passed in its last six months to the newly-created National Technical Unit (NTU) responsible for the follow-on Land-based Poverty Alleviation Project. The NTU is structured with an administrative team experienced in all aspects of the new project.

NEAD's performance was satisfactory overall, and especially good in regard to the many evaluations, studies and special events designed to disseminate project lessons and results. NEAD's collaboration with the UNICAMP evaluation team was particularly fruitful. The project has a unique body of research data on an innovative and still controversial land re-distribution methodology, now in its 7th year.

*State Technical Units:* Performance was generally satisfactory within the context of difficulties associated for the most part with administering a new methodology subject to high beneficiary demand and under tight fiscal conditions (see 5.3). Project coordination was handled within the same STUs established for the purposes of administering the Bank-supported, community-driven rural poverty reduction projects, which reduced the administrative costs of the CT (and clearly benefited the project due to their accumulated institutional and technical knowledge from a decade of administering and coordinating those programs). Each STU established a technical group responsible exclusively for the CT; the CT used the administrative and financial structure established for the rural poverty projects. STUs also leveraged, to different degrees depending on the state, support from other public bodies such as State Land Institutes, departments/agencies responsible for land administration and linked to state secretariats of agriculture, and NGOs at the state and municipal levels, which resulted in good quality project supervision. Field supervision was handled directly by the STUs and by other bodies such as State Land Institutes. In Ceará, most supervision was done by the Technical Assistance and Rural Extension Company, and in Bahia, through the Agrarian Reform Coordination Unit of the State Secretariat of Agriculture. In Maranhão, Regional Management offices of the State Government provided supervision and some technical assistance.

### *7.7 Overall Borrower performance:*

Rated Satisfactory

## 8. Lessons Learned

*Critical Factors:* A series of factors was of fundamental importance to the successful outcome of this project:

- (i) Political and social timeliness;
- (ii) Commitment of Federal, State and local leaders, confronted with chronic rural poverty and landlessness and seeking cost-effective and non-conflictive options for land-re-distribution;
- (iii) Profound changes in the relationship between the Federal Government, states and municipalities under the Constitution of 1988, permitting decentralized governance, community participation and the direct transfer of resources to beneficiaries;
- (iv) The Bank's global knowledge base and willingness to act as "honest broker" in a risky, controversial and innovative approach;
- (v) Formal evaluation program resulting in extensive data supporting arguments about impact and potential; and,
- (vi) Demonstration effects across the Northeast region and within states at the local level, of the successful community-driven, rural poverty projects and the opportunity to replicate/incorporate their principles, practices and lessons.

### *Lessons:*

Evaluation and supervision have produced the following lessons:

- (i) *The market-based mechanism, community-led, is an agile and effective complementary method for settling landless rural families, condensing on average, the entire process from identification to purchase into about 90 days.*
- (ii) *Self-selection for participation effectively pinpoints the rural poor and in particular, the "entrepreneurial poor", those more likely to settle and produce successfully. The vast majority of beneficiaries have had household incomes/characteristics consistent with the targeted group.*
- (iii) *Most properties acquired are modestly-sized relative to traditional land reform projects, settling some 15-30 families. Associations with <10 families have difficulty forming a leadership core, and aggregate resources available for investment after purchase of land may be insufficient. Groups exceeding 50 families are unwieldy, with diminished bargaining power due to internal pressures; and, few available properties can accommodate large numbers.*
- (iv) *Communities have consistently selected fair to good quality land representative of predominant conditions in each state, at significant cost savings vs. traditional land reform, and*

without elevating land prices or promoting collusion.

(v) *In drought-prone areas*, authorities are advised to avoid approving purchase proposals for land where irrigation does not exist or cannot be rapidly installed.

(vi) *Implementation through community associations is successful*. Associations show impressive capacity to mobilize members, select and negotiate land for purchase, prepare on-farm productive investments and execute them.

(vii) *Evaluation demonstrates the financial and economic viability of a majority of subprojects*, with financial returns in more favorable climatic zones exceeding initial estimates. In semi-arid zones, financial estimates are met where water access is adequate, dictating development of a strategy for resolving the water access issue where applicable.

(viii) *Government's political will* to implement and finance sensitive new programs extending the benefits of secure land ownership to large numbers of poor rural families, and challenge vested interests, must be correctly assessed and calibrated in project design at the outset; continuous effort to build support and dialogue with stakeholders is essential, especially in the context of program expansion.

(ix) *Strong MIS is a key instrument for monitoring and implementation* of a project involving numerous community groups across a broad area; and, with evaluation, permits early identification of issues and continuous inclusion of improvements/adaptations.

(x) *Technical assistance and credit are vital inputs* in the early years of new settlement to create, consolidate and innovate productive activity, build social cohesion and boost sustainability. Ensuring their availability in rural areas requires a strategy and strong follow-up.

(xi) The importance of *strong evaluation and information dissemination programs* cannot be over-stressed.

## 9. Partner Comments

(a) Borrower/implementing agency:

The Borrower provided the following comments on the Bank's draft ICR:



MINISTÉRIO DO DESENVOLVIMENTO AGRÁRIO  
SECRETARIA DE REFORMA AGRÁRIA  
UNIDADE TÉCNICA NACIONAL

OFICIO Nº 502 / MDA/ SRA / UTN

Brasília, 25 de novembro de 2003.

Ref. Implementation Completion Report, Projeto Piloto de apoio à Reforma Agrária e combate à Pobreza Rural (Cédula da Terra) – 4147-BR.


Prezado Dr. Luis Coirolo,

Com referência ao ICR do Projeto Piloto de apoio à Reforma Agrária e Combate à Pobreza Rural, implantado em 5 estados do Nordeste do Brasil no período de 1998 a 2002, tenho a informar e aduzir o seguinte:

- a) Os termos do referido relatório refletem, com fidelidade, as condições de execução do Projeto, seus impactos e a aprendizagem que o mesmo proporcionou ao Governo do Brasil sobre instrumentos complementares ao processo de redistribuição de terras rurais. A avaliação positiva da melhoria das condições de vida e da renda da população beneficiada, com todas as dificuldades de um Piloto, a partir de uma avaliação externa realizada pela UNICAMP, constitui um fator adicional para confirmar os bons resultados obtidos pelo Projeto, além do seu baixo custo;
- b) As lições aprendidas tais como: a necessidade de ampliar a participação dos trabalhadores e entidades de apoio; maior transparência no processo de avaliação e aprovação das propostas de financiamento; necessidade de investimentos em capacitação dos grupos beneficiados; apoio à promoção de processos de comercialização; incentivos para a ampliação do processo de barganha na negociação das terras, foram incorporadas ao desenho e à execução do Projeto de Crédito Fundiário e Combate à Pobreza Rural, que sucedeu o Piloto, em ampla negociação com o movimento sindical dos trabalhadores rurais, liderado pela CONTAG e Federações estaduais.

Cabe finalmente ressaltar que toda essa experiência será agora incorporada pelo Governo Federal no desenho final do Programa Nacional de Crédito Fundiário, complementar ao Programa de Reforma Agrária e que beneficiará 130 mil famílias nos próximos 3 anos.

Atenciosamente,

  
FRANCISCO EDSON TEÓFILO FILHO  
Diretor da UTN  
Coordenador Executivo do NEAD – 1998/2003

Ilmo. Sr.  
Dr. Luis O. Coirolo  
Task Manager do Projeto  
Banco Mundial  
NESTA

SCN – Edifício Brasília Trade Center - 5ª Andar - Sala 506  
CEP: 70.711-902 - Brasília, DF  
Fone: (61) 328 8602  
[www.creditofundario.org.br](http://www.creditofundario.org.br)

*(b) Cofinanciers:*

na

*(c) Other partners (NGOs/private sector):*

na

## **10. Additional Information**

na

## Annex 1. Key Performance Indicators/Log Frame Matrix

### A. Key Performance Indicators

A. Key Performance IndicatorsProject Components and Activities	Responsible Institution	Unit	Estimated Total	Actual Outcome
A. Land purchases	STUs, community associations			
Land purchases financed:				
- beneficiary families		families	15,000	15,267
- beneficiary indivs.		individuals	75,000	76,300
- subprojects		No.	500	609
B. Community subprojects	STU, community associations			
Subprojects implemented				
- start-up grants		families	15,000	15,267
- investment subprojects		No.	2,500	2,965
C. Institutional development				
- prep. of annual program of TA and training	STU	No. per state	3	5
Training, TA and seminars	STU			
- beneficiary assns		No.	50	95
-STU/SLI staff		No.	10	22
Publicity campaigns, each state	STU			
- present to Bank	STU			done
- implementation	STU			done
D. Project admin. Supervision, monitoring				
- supervision of subprojects	STU	No. visits	6,000	7,300
- annual operating plans (POA)	STU	No. per state	4	5
Monitoring reports and reviews				
- monthly disb. & MIS update	STU	No. per state	42	48
- semi-annual reports	STU	No. per state	7	10
- external audits	STU	No. per state	4	5
-phys. perf. reviews	STU	No. per state	4	5
- implem. review	STU			Done
- mid-term review	STU, MEPF, Bank			Done
E. Project Evaluation				
Center for Agrarian Studies (NEAD)	MEPF (later MDA)			
- established				Done
- operational				Done
- prepare annual plan and TOR				Done
Information network and dissemination	MEPF (later MDA)			
- implement activities				Done
Evaluation studies	MEPF/MDA			
- design study				Done (1998)
- baseline study				Done (1999)
- re-surveys				Done (2001, 2003)
Studies	MEPF/MDA			
Land market study				Done
Financial options study				Done
Social demand study				Done
Legal framework for coops. study				Done
Other studies				Done (4.2)

## B. Log Frame Matrix

Narrative Summary	Key Performance Indicators	Actual/Latest Estimate
<b>1A: Outcome/Impact Indicators</b>		
1. Increased incomes of rural poor through improved access to land and participation in community subprojects	1. Incomes of families participating in the project vs. control groups and pre-project income levels.	1. From 1998-2003, family nominal income rose 180% over pre-project levels and real income (deflated) rose 75%. 2. By 2003, about 65% of family income was from on-farm activities vs. 13% in 1998 and 45% in 2000.
2. Increased agricultural output of lands included in the project	2. Net economic benefits of increased agricultural production	2. Economic rates of return (ERR) 21% Semi-arid, 27% Meio Norte, 55% Zona da Mata. Financial rates of return (FRR) 22% Semi-arid, 51% Meio Norte, 35% Zona da Mata (higher initial investment cost of land).
3. Piloting a new, market-based approach to land re-distribution	3. Pilot program tested and evaluated	3. Pilot program successfully tested. Evaluated in 1999, 2001, 2003. Resulted in scale-up to Land-based Poverty Alleviation Project I (Crédito Fundiário, 7037-BR), a 4-year program in 14 states, with estimated total estimated cost of around US\$400.0 million (original denominated in Euro) and benefiting 50,000 families.
<b>1B : Output Indicators</b>		
1. Establishment of family farms on lands purchased by communities with project (Federal Government) funds	1. Family farms established for about 15,000 participating families	1. Family farms established for 15,267 families
2. Implementation of land value improving community subprojects	2. Subprojects implemented on-farm, covering about 15,000 beneficiaries	2. 2,965 investment subprojects implemented on settlements/farms benefiting about 15,267 families (water supply, electricity, access roads, small-scale agro-processing, animal herd development, crop development, tractor, creches, community schools.
3. Information and analysis permitting evaluation of the pilot and its capacity for replication, and if indicated, measures to broaden program implementation.	3. PAD project performance indicators include : (i) an Evaluation study (detailed design study, baseline study and re-surveys) ; and (ii) other studies to include land market study.	3. (i) See 4.2 for studies financed; (ii) baseline study (1998), prelim. impact evaluation 2001, end-project evaluation 2003; (iii) eval. results lead to Land-based Poverty Alleviation Project I (7037-BR) in 14 states.

## Annex 2. Project Costs and Financing

### A. Project Costs and Financing

Project Component	<i>At Appraisal</i>			<i>At Closing</i>		
	Local	Foreign	Total	Local	Foreign	Total
Land Purchase Fund	45.0	0.0	45.0	45.0	0.0	45.0
Community Subprojects	69.4	14.9	84.3	66.4	0.0	66.4
Community Development Support	1.9	1.6	3.5	1.4	1.2	2.6
Project Adm., Sup., Mon.	7.2	2.0	9.2	1.6	0.5	2.1
Impact Evaluation	4.8	1.2	6.0	4.2	1.0	5.2
<b>Total Baseline Cost</b>	<b>128.3</b>	<b>19.7</b>	<b>148.0</b>	<b>118.6</b>	<b>2.7</b>	<b>121.3</b>
Physical Contingencies	1.0	0.3	1.3	0.0	0.0	0.0
Price Contingencies	0.3	0.4	0.7	0.0	0.0	0.0
<b>Total Project Cost</b>	<b>129.6</b>	<b>20.4</b>	<b>150.0</b>	<b>118.6</b>	<b>2.7</b>	<b>121.3</b>

### B. Project Cost by Procurement Arrangement

At Appraisal	<i>(US\$million)</i>					Total Cost (incl. Contingencies)
	Local	Direct				
	NCB	Shopping	Contracting	Other	N.B.F.	
Land	0.0	0.0	0.0	0.0	45.0	45.0
	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Civil Works	3.5	1.5	32.8	0.0	0.0	37.8
	(3.2)	(1.3)	(29.6)	(0.0)	(0.0)	(34.1)
Goods and Materials	0.0	2.4	44.1	0.0	0.0	46.5
	(0.0)	(2.2)	(39.6)	(0.0)	(0.0)	(41.8)
Cons. Serv., Studies and Proj. Adm.	0.0	0.0	0.0	20.7	0.0	20.7
	(0.0)	(0.0)	(0.0)	(14.1)	(0.0)	(14.1)
<b>TOTAL</b>	<b>3.5</b>	<b>3.9</b>	<b>76.9</b>	<b>20.7</b>	<b>45.0</b>	<b>150.0</b>
	<b>(3.2)</b>	<b>(3.5)</b>	<b>(69.2)</b>	<b>(14.1)</b>	<b>(0.0)</b>	<b>(90.0)</b>



At Closing	(US\$million)					Total Cost (incl. Contingencies)
	Local NCB	Shopping	Direct Contracting	Other	N.B.F.	
Land	0.0	0.0	0.0	0.0	45.0	45.0
	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Civil Works	2.7	1.5	25.7	0.0	0.0	29.9
	(2.4)	(1.3)	(23.2)	(0.0)	(0.0)	(26.9)
Goods and Materials	0.0	1.8	34.7	0.0	0.0	36.5
	(0.0)	(1.7)	(31.2)	(0.0)	(0.0)	(32.9)
Cons. Serv., Studies and Proj. Adm.	0.0	0.0	0.0	9.9	0.0	9.9
	(0.0)	(0.0)	(0.0)	(8.7)	(0.0)	(8.7)
<b>TOTAL</b>	<b>2.7</b>	<b>3.3</b>	<b>60.4</b>	<b>9.9</b>	<b>45.0</b>	<b>121.3</b>
	<b>(2.4)</b>	<b>(3.0)</b>	<b>(54.4)</b>	<b>(8.7)</b>	<b>(0.0)</b>	<b>(68.5)</b>

### C. Allocation of Loan Proceeds

Category Description	At Appraisal			At Closing		
	Est. Project Cost	Fin. %	Loan Proceeds	Est. Project Cost	Fin. %	Loan Proceeds
Land	45.0	0%	0.0	45.0	0%	0.0
Grants for Comm. Subp.	84.3	90%	75.9	66.4	90%	59.8
Inst. Strengthening	4.0	100%	4.0	2.6	100%	2.6
Project Evaluation	6.0	100%	6.0	5.2	100%	5.2
Project Adm.	5.7	20%	1.1	0.5	20%	0.1
Field Supervision and Mon.	3.0	50%	1.5	1.6	50%	0.8
Unallocated	2.0		1.5	0.0		0.0
<b>TOTAL</b>	<b>150.0</b>	<b>60%</b>	<b>90.0</b>	<b>121.3</b>	<b>56%</b>	<b>68.5</b>

### D. Sources of Financing

Source	At Appraisal			At Closing		
	Local	Foreign	Total	Local	Foreign	Total
Federal Government	45.0	0.0	<b>45.0</b>	45.0	0.0	<b>45.0</b>
State Governments	6.6	0.0	<b>6.6</b>	1.2	0.0	<b>1.2</b>
Beneficiary Communities	8.4	0.0	<b>8.4</b>	6.6	0.0	<b>6.6</b>
IBRD	69.9	20.1	<b>90.0</b>	53.4	15.1	<b>68.5</b>
<b>TOTAL</b>	<b>129.9</b>	<b>20.1</b>	<b>150.0</b>	<b>106.2</b>	<b>15.1</b>	<b>121.3</b>

### Annex 3. Economic Costs and Benefits

The economic and financial analyses of the project are based on three family farm types which were implemented in the project area. Under the initial project design, a fourth model – peri-urban – was also included, but was never operationalized. The *Semi-Arid* represents farms in the interior of the Northeast (the *Sertão*), in particular Ceará, Pernambuco, Minas Gerais and Bahia. Agriculture in the Semi-Arid focuses on livestock (cattle as well as goats), subsistence food crops and a small area of higher value crops (*Pinha*, representative of all higher value products). There is minimal irrigation but access to limited quantities of water for livestock and a small area of higher value crops. The *Meio-Norte* typifies the beneficiaries in the State of Maranhão. This area is characterized by increased rainfall, making cultivation of some fruit crops feasible. Family farms in the coastal region of Pernambuco are represented by the *Zona de Mata*, which is characterized by sufficient rainfall and overall favorable climatic conditions, allowing much smaller cropped areas.

The analysis draws on actual individual crop budgets and herd data. Crop yields and associated cropping patterns are taken from a follow-up evaluation of project beneficiaries conducted in July/August 2003. The analysis is based on the following assumptions:

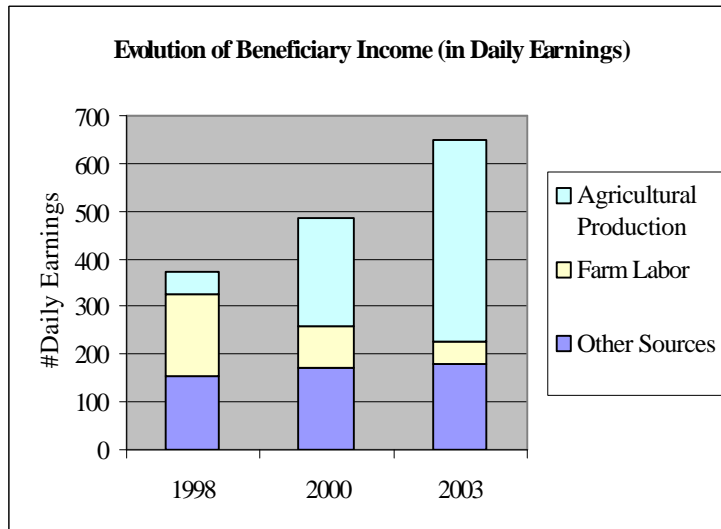
1. A 10-year horizon is considered.
2. No multiplier effects on the local economy are considered.
3. No effect of the project on the market price of land is considered. This is borne out in actual project experience.

The analysis is further constructed on the following facts:

1. Land repayment is over a 20-year term, with three years of grace, at 6% a.p.r, with a 50% rebate on financing charges.
2. A start-up grant of R\$1,300 was received by each beneficiary family upon receipt of the land.
3. Complementary subproject investments are valued at the average per-family (in R\$), based on actual project data and including a 10% family contribution (in terms of labor).
4. Family labor is valued at R\$6 per day, while without-project family income is taken to be R\$2,070 or 90% of the legal minimum wage.
5. Net economic benefits are calculated by: (i) subtracting from the benefit flow to families the Government cost of the program and adding incremental tax revenues and transfers to previous land owners.

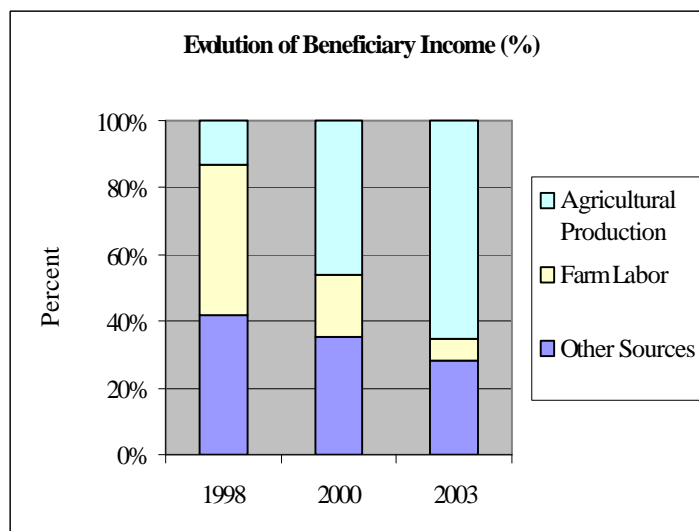
### Results

*Beneficiary Incomes:* Figures 1a and 1b depict the transformations in household income that have occurred for beneficiary families. First, over the period 1998 to 2003, families participating in the project have registered income increases of on average, 180% over initial levels. In 1998, at project inception, the typical beneficiary family had a total income of R\$2,057. By 2000, average income had risen to R\$2,672, while average income as of August 2003 had soared to R\$5,777. Another way of recognizing the income increase, while correcting for inflation over the period, is to convert this nominal income into daily earnings.



**Figure 1a**

In Figure 1a, for both 1998 and 2000 figures, a daily wage of R\$5.50 is employed. For 2003, the daily wage is set at R\$8.88. Whereas families in 1998 and 2000 averaged the equivalent of 374 and 487 daily wages annually, respectively, by 2003, this same figure had risen to 650 daily wages annually.



**Figure 1b**

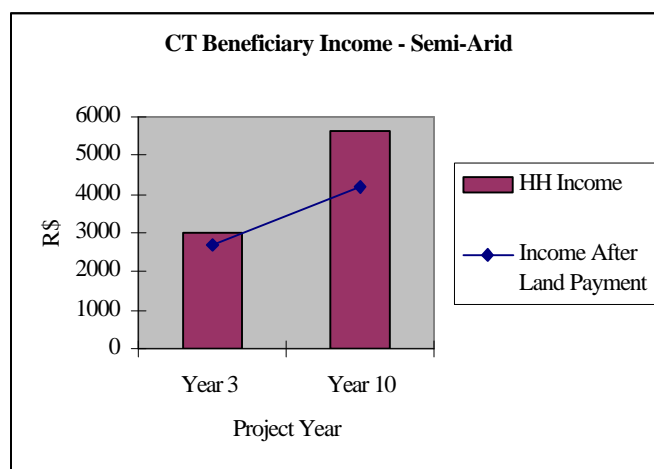
Second, the sources of beneficiary household income showed a significant shift toward own agricultural production and away from both other sources (e.g., transfers, pensions) and farm labor (Fig. 1b). Whereas in 1998, agricultural production comprised only 13% of total beneficiary income, by 2003, this same source of income had grown to account for nearly 65%.

Ex post economic and financial rates of return were calculated for the three types of family farms (Table 1). In each case, these were considered satisfactory. Economic Rates of Return (ERR) ranged from 21% (Semi-Arid) – where agro-climatic conditions are the most challenging among the three farm types – to about 55% for the more favorable Zona de Mata. Overall, the ERR for the project was 25%.

Lower land prices and reduced own-consumption (relative to the Semi-Arid) led to a much higher FRR in the Meio-Norte. In turn, the much higher price for land purchases in the Zona de Mata had a dampening effect on the early cash flow for these beneficiaries, which resulted in a lower FRR. However, monetary income in the Zona de Mata, far surpassing the levels in both the Semi-Arid and Meio-Norte, contributed to an ERR roughly double that of these other two regions. (see Table 1).

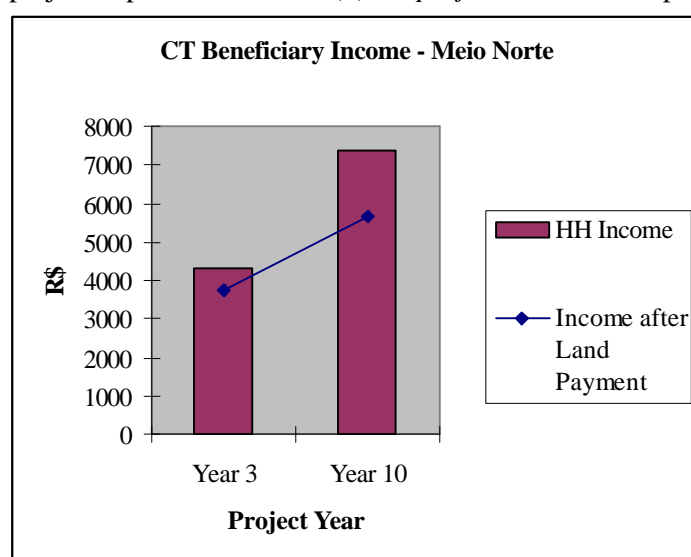
**Table 1: Economic and Financial Rates of Return, Cedula da Terra**

Item	Semi-arid	Meio Norte	Zona da Mata	Total Project
Economic Rate of Return (ERR)	21%	27%	55%	25%
Financial Rate of Return (FRR)	22%	51%	35%	29%



**Figure 2a**

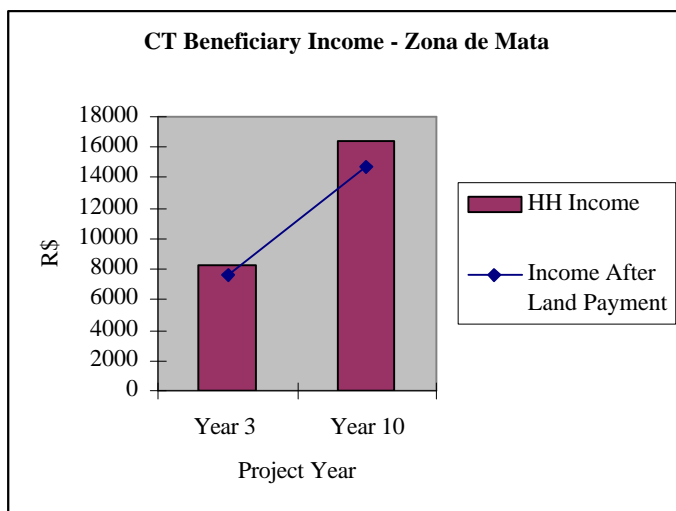
Figures 2a-2c graphically depict two milestones for the beneficiary families, in terms of income generated from agricultural production: (i) the *actual* income, across the three farm types, after Year 3 of project implementation and (ii) the *projected* income, expected ten years after the land purchase.



**Figure 2b**

Evaluation results also confirm that beneficiary families are now generating cash incomes sufficient to both satisfy debt repayment and progressively construct an increasing asset base from agricultural production on the land purchased under the project.

Overall, average annual household income rose to R\$5,777 by 2003, nearly three times the household income registered in 1998. Across the three farm types, average beneficiary income from agricultural production alone had, as of year 3 of the project, risen by 45% in the Semi-Arid, 107% in the Meio-Norte and a staggering 300% in the Zona de Mata.



**Figure 2c**

A key aspect of the sustainability of the project lies in the capacity of beneficiaries to generate sufficient cash income to both service the debt incurred for the land purchase and continue to accumulate assets for future farm improvements. Evaluation results indicate that, when all monetary household income is considered (i.e., cash income from agricultural production, off-farm employment, transfers and pensions), project beneficiaries have sufficient resources to adequately make annual debt service payments – ranging from R\$300 in the Semi-Arid to R\$650 in the Zona de Mata.

## Annex 4. Bank Inputs

(a) Missions:

Stage of Project Cycle	No. of Persons and Specialty (e.g. 2 Economists, 1 FMS, etc.)		Performance Rating	
			Implementation Progress	Development Objective
Month/Year	Count	Specialty		
<b>Identification/Preparation</b>				
05/1996	2	Ag. Economist		
	1	Economist		
	2	Ag. Specialist		
<b>Appraisal/Negotiation</b>				
11/1996	3	Ag. Economist		
	1	Economist		
	2	Ag. Specialist		
01/1997	2	Ag. Economist		
	2	Ag. Specialist		
	1	Economist		
	4	Consultants		
<b>Supervision</b>				
06/1997	<i>Update</i>	-	S	S
04/1998	1	Ag. Economist	S	S
	1	Economist		
	1	Ag. Specialist		
09/1998	1	Ag. Economist	S	S
	1	Ag. Specialist		
05/1999	1	Ag. Economist	S	S
11/1999	1	Ag. Economist	S	S
	1	Ag. Specialist		
05/2000 (MTR)	1	Ag. Economist	S	S
	1	Economist		
	1	Ag. Specialist		
09/2000	1	Ag. Specialist	S	S
03/2001	1	Ag. Specialist	S	S
	1	Ag. Economist		
11/2001	1	Ag. Specialist	S	S
06/2002	1	Ag. Specialist	S	S
11/2002	1	Ag. Specialist	S	S
<b>ICR</b>				
03/2003	1	RD Specialist	S	S
	1	Ag. Specialist		

(b) Staff:

Stage of Project Cycle	Actual/Latest Estimate	
	No. Staff weeks	US\$ ('000)
Identification/Preparation	22.4	18.0
Appraisal/Negotiation	13.3	33.2
Supervision	140.3	460.1
ICR	6.0	13.5
Total	182.0	524.8

## Annex 5. Ratings for Achievement of Objectives/Outputs of Components

(H=High, SU=Substantial, M=Modest, N=Negligible, NA=Not Applicable)

	<u>Rating</u>				
<input type="checkbox"/> <i>Macro policies</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input type="checkbox"/> <i>Sector Policies</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input checked="" type="checkbox"/> <i>Physical</i>	<input checked="" type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input checked="" type="checkbox"/> <i>Financial</i>	<input type="radio"/> H	<input checked="" type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input checked="" type="checkbox"/> <i>Institutional Development</i>	<input type="radio"/> H	<input checked="" type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input checked="" type="checkbox"/> <i>Environmental</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA

### *Social*

<input checked="" type="checkbox"/> <i>Poverty Reduction</i>	<input type="radio"/> H	<input checked="" type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input checked="" type="checkbox"/> <i>Gender</i>	<input type="radio"/> H	<input checked="" type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input checked="" type="checkbox"/> <i>Other (Please specify)</i>	<input type="radio"/> H	<input checked="" type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<i>Social capital development</i>					
<input checked="" type="checkbox"/> <i>Private sector development</i>	<input type="radio"/> H	<input checked="" type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input checked="" type="checkbox"/> <i>Public sector management</i>	<input type="radio"/> H	<input checked="" type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input type="checkbox"/> <i>Other (Please specify)</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA

Note: Under Social, gender is rated Substantial as an outcome of investments in energy, water supply and housing, all of which benefit poor rural women, and the employment and family income benefits of the settlement process.



## Annex 6. Ratings of Bank and Borrower Performance

(HS=Highly Satisfactory, S=Satisfactory, U=Unsatisfactory, HU=Highly Unsatisfactory)

### 6.1 Bank performance

#### Rating

- |   |                          |                                    |                         |                          |
|---|--------------------------|------------------------------------|-------------------------|--------------------------|
| <input checked="" type="checkbox"/> Lending     | <input type="radio"/> HS | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |
| <input checked="" type="checkbox"/> Supervision | <input type="radio"/> HS | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |
| <input checked="" type="checkbox"/> Overall     | <input type="radio"/> HS | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |

### 6.2 Borrower performance

#### Rating

- |   |                          |                                    |                         |                          |
|---|--------------------------|------------------------------------|-------------------------|--------------------------|
| <input checked="" type="checkbox"/> Preparation                           | <input type="radio"/> HS | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |
| <input checked="" type="checkbox"/> Government implementation performance | <input type="radio"/> HS | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |
| <input checked="" type="checkbox"/> Implementation agency performance     | <input type="radio"/> HS | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |
| <input checked="" type="checkbox"/> Overall                               | <input type="radio"/> HS | <input checked="" type="radio"/> S | <input type="radio"/> U | <input type="radio"/> HU |

## **Annex 7. List of Supporting Documents**

*Estudo de Avaliação de Impactos do Programa Cédula da Terra, 2003: Relatório Final.* State University of Campinas, November 2003.

*Estudo de Avaliação de Impactos do Programa Cédula da Terra, 2001. Relatório Síntese.* State University of Campinas, and Ministry of Agrarian Development, November 2002.

Evaluation of *Cédula da Terra* in the States of Bahia and Ceará. State University of Campinas, 1999

Project Baseline Study. State University of Campinas, Ministry of Agrarian Development and Center for Agrarian Studies (NEAD), 1999

*Avaliação Preliminar do Cédula da Terra. Relatório Técnico* 1999a and 1999b, Buainain, Silveira, Souza Filho, Magalhães.

Can Community-driven Infrastructure Programs Contribute to Social Capital? Findings from the Rural Northeast of Brazil. Ryan and Costa, May 12, 2003.

See also list of research studies in Section 4.2.

Project Supervision Reports (PSR)

Project Appraisal Document, Land-based Poverty Alleviation Project I, Report 19585-BR, November 6, 2000.

Project Audit Reports

Physical Performance Reviews (annual)

