

CONFORMED COPY

LOAN NUMBER 3269 BR

(Science Research and Training Project)

between

FEDERATIVE REPUBLIC OF BRAZIL

and

INTERNATIONAL BANK FOR RECONSTRUCTION
AND DEVELOPMENT

Dated February 15, 1991

LOAN NUMBER 3269 BR

LOAN AGREEMENT

AGREEMENT, dated February 15, 1991, between FEDERATIVE REPUBLIC OF BRAZIL (the Borrower) and INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT (the Bank).

WHEREAS the Borrower, having satisfied itself as to the feasibility and priority of the Project described in Schedule 2 to this Agreement, has requested the Bank to assist in the financing of the Project;

WHEREAS the Bank has agreed, on the basis, inter alia, of the foregoing, to extend the Loan to the Borrower upon the terms and conditions set forth in this Agreement;

NOW THEREFORE the parties hereto hereby agree as follows:

ARTICLE I

General Conditions; Definitions

Section 1.01. The "General Conditions Applicable to Loan and Guarantee Agreements" of the Bank, dated January 1, 1985, with the last sentence of Section 3.02 deleted (the General Conditions) constitute an integral part of this Agreement.

Section 1.02. Unless the context otherwise requires, the several terms defined in the General Conditions and in the Preamble to this Agreement have the respective meanings therein set forth and the following additional terms have the following meanings:

(a) "Account Bank" means the bank referred to in paragraph (c) of Section 2.02 of this Agreement;

(b) "Beneficiary" means any legal entity carrying out a Sub-project;

(c) "CAPES" means Coordenacao de Aperfeicoamento de Pessoal de Nivel Superior (Coordinating Agency for Training of High Level Personnel), an agency of the Borrower's Ministry of Education;

(d) "Central Bank" means Banco Central do Brasil, the Borrower's Central Bank;

(e) "Contractual Arrangements" means any of the arrangements to be entered between the Borrower, through SCT, and, respectively, FINEP and CNPQ pursuant to the provisions of Section 3.01 (h) of the Loan Agreement;

(f) "CNPQ" means Conselho Nacional de Desenvolvimento Cientifico e Tecnologico (National Council for Scientific and Technological Development), a public foundation under the supervision of SCT;

(g) "CESA" means the Special Account referred to in paragraph (b) of Section 2.02 of this Agreement;

(h) "Cruzeiros" means the currency of the Borrower;

(i) "Entity" means CNPQ or FINEP or the Borrower acting through CAPES in respect of the financing of a Sub-project;

(j) "FESA" means the Special Account referred to in paragraph (c) of Section 2.02 of this Agreement;

(k) "FINEP" means Financiadora de Estudos e Projetos - FINEP (Agency for Financing Studies and Projects), a public enterprise under the supervision of SCT;

(l) "FSRMM" means Adicional ao Frete para a Renovacao da Marinha Mercante - AFRMM, the Borrower's Freight Surcharge for the Renewal of the Merchant Marine established by Decree-Law No. 1142, of December 30, 1970, as amended to December 31, 1987, or any other tax, levy or charge that, in the opinion of the Bank, may substitute it, in whole or in part, after January 1, 1988;

(m) "GEA" means Grupo Especial de Acompanhamento, the review and advisory board referred to in Section 3.01 (d) of this Agreement;

(n) "Grants" means the grants to be provided by the Borrower, through the Entities, for financing Sub-projects;

(o) "PADCT II" means the Borrower's Programa de Apoio ao Desenvolvimento Cientifico e Tecnologico (Second Support Program for Scientific and Technological Development) established by Resolution No. RC 2/84, dated April 27, 1984, of the Borrower's Conselho Cientifico e Tecnologico (Science and Technology Council);

(p) "PADCT II Guidelines" means the Documento Basico (Basic Document), approved by Portaria No. 114, of July 12, 1990, of SCT, as amended by Portaria No. 19 of February 1, 1991, of SCT, and the Manual Operativo (Operating Manual), approved by the Board of the Executive Secretariat of PADCT II on November 14, 1990;

(q) "Plano de Aplicacao" means the annual plan agreed to at the beginning of each fiscal year between SCT and the Treasury for release of funds required for the carrying out of Sub-projects;

(r) "Prior Project" means the Science and Technology Project described in Schedule 2 to the Loan Agreement, dated February 6, 1985, between the Borrower and the

Bank;

(s) "SCT" means Secretaria de Ciencia e Tecnologia da Presidencia da Republica, the Borrower's Secretariat for Science and Technology;

(t) "Special Account" means either of the accounts to be opened and maintained pursuant to paragraphs (b) and (c) of Section 2.02 of this Agreement, unless otherwise required by the context;

(u) "Sub-program" means each of the programs of action for the areas listed in Part A of the Project, as detailed in the corresponding Sub-program Proposal;

(v) "Sub-program Proposal" means a proposal in respect of a Sub-program setting forth, inter alia, the rationale, overall goals and technical details of Sub-projects, as well as associated resource allocations, model Sub-project budgets and special criteria, procedures and mechanisms for Sub-project management;

(w) "Sub-project" means a project, under a Sub-program, to be carried out by a Beneficiary, partially financed out of the proceeds of the Loan; and

(x) "Treasury" means Departamento do Tesouro Nacional, an agency of the Borrower's Ministry of Economy, Finance and Planning.

ARTICLE II

The Loan

Section 2.01. The Bank agrees to lend to the Borrower, on the terms and conditions set forth or referred to in the Loan Agreement, various currencies that shall have an aggregate value equivalent to the amount of one hundred and fifty million dollars (\$150,000,000), being the sum of withdrawals of the proceeds of the Loan, with each withdrawal valued by the Bank as of the date of such withdrawal.

Section 2.02. (a) The amount of the Loan may be withdrawn from the Loan Account in accordance with the provisions of Schedule 1 to this Agreement for expenditures made (or, if the Bank shall so agree, to be made) in respect of the reasonable cost of goods, works and services required for the Project described in Schedule 2 to this Agreement and to be financed out of the proceeds of the Loan.

(b) The Borrower shall, for the purposes of the Project, open and maintain in dollars a special deposit account in the Central Bank on terms and conditions satisfactory to the Bank. Deposits into, and payments out of, this special deposit account (CESA) shall be made exclusively to meet expenditures in Cruzeiros incurred in respect of the reasonable cost of goods, works and services required to carry out the Project and to be financed by the Bank pursuant to paragraph (a) above.

(c) The Borrower shall, for the purposes of the Project, open and maintain thereafter in a bank acceptable to the Bank (the Account Bank) a special deposit account in dollars on terms and conditions satisfactory to the Bank, including appropriate protection against set-off, seizure or attachment. Deposits into, and payments out of, this special account (FESA) shall be made exclusively to meet expenditures in currencies other than Cruzeiros incurred in respect of the reasonable cost of goods, works and services required to carry out the Project and to be financed by the Bank pursuant to paragraph (a) above.

(d) Deposits into, and payments out of, CESA and FESA shall be made in accordance with the provisions of Schedule 5 to this Agreement. The Borrower shall furnish to the Bank each month certified statements of CESA and FESA.

Section 2.03. The Closing Date shall be December 31, 1995 or such later date as the Bank shall establish. The Bank shall promptly notify the Borrower of such later date.

Section 2.04. The Borrower shall pay to the Bank a commitment charge at the rate

of three-fourths of one percent (3/4 of 1%) per annum on the principal amount of the Loan not withdrawn from time to time.

Section 2.05. (a) The Borrower shall pay interest on the principal amount of the Loan withdrawn and outstanding from time to time, at a rate for each Interest Period equal to the Cost of Qualified Borrowings determined in respect of the preceding Semester, plus one-half of one percent (1/2 of 1%). On each of the dates specified in Section 2.06 of this Agreement, the Borrower shall pay interest accrued on the principal amount outstanding during the preceding Interest Period, calculated at the rate applicable during such Interest Period.

(b) As soon as practicable after the end of each Semester, the Bank shall notify the Borrower of the Cost of Qualified Borrowings determined in respect of such Semester.

(c) For the purposes of this Section:

(i) "Interest Period" means a six-month period ending on the date immediately preceding each date specified in Section 2.06 of this Agreement, beginning with the Interest Period in which this Agreement is signed.

(ii) "Cost of Qualified Borrowings" means the cost, as reasonably determined by the Bank and expressed as a percentage per annum, of the outstanding borrowings of the Bank drawn down after June 30, 1982, excluding such borrowings or portions thereof as the Bank has allocated to fund: (A) the Bank's investments; and (B) loans which may be made by the Bank after July 1, 1989 bearing interest rates determined otherwise than as provided in paragraph (a) of this Section.

(iii) "Semester" means the first six months or the second six months of a calendar year.

(d) On such date as the Bank may specify by no less than six months' notice to the Borrower, paragraphs (a), (b) and (c) (iii) of this Section shall be amended to read as follows:

"(a) The Borrower shall pay interest on the principal amount of the Loan withdrawn and outstanding from time to time, at a rate for each Quarter equal to the Cost of Qualified Borrowings determined in respect of the preceding Quarter, plus one-half of one percent (1/2 of 1%). On each of the dates specified in Section 2.06 of this Agreement, the Borrower shall pay interest accrued on the principal amount outstanding during the preceding Interest Period, calculated at the rates applicable during such Interest Period."

"(b) As soon as practicable after the end of each Quarter, the Bank shall notify the Borrower of the Cost of Qualified Borrowings determined in respect of such Quarter."

"(c) (iii) 'Quarter' means a three-month period commencing on January 1, April 1, July 1 or October 1 in a calendar year."

Section 2.06. Interest and other charges shall be payable semiannually on April 1 and October 1 in each year.

Section 2.07. The Borrower shall repay the principal amount of the Loan in accordance with the amortization schedule set forth in Schedule 3 to this Agreement.

Section 2.08. FINEP is designated as representative of the Borrower for the purposes of taking any action required or permitted to be taken under the provisions of Section 2.02 of this Agreement and Article V of the General Conditions.

ARTICLE III

Execution of the Project

Section 3.01. (a) The Borrower declares its commitment to the objectives of the

Project as set forth in Schedule 2 to this Agreement, and, to this end, shall carry out the Project through SCT with due diligence and efficiency and in conformity with appropriate scientific, technological, administrative and financial practices and the provisions of the PADCT II Guidelines, and shall provide, promptly as needed, the funds, facilities, services and other resources required for the Project.

(b) The Borrower, through SCT, shall maintain as Executive Secretary of PADCT II a person with qualifications and experience satisfactory to the Bank.

(c) The Borrower shall, in accordance with the provisions of the PADCT II Guidelines and the Sub-program Proposals, cause: (i) Sub-projects to be selected: (A) by technical committees consisting mainly of members of the Borrower's science and business communities; (B) on a competitive basis; and (C) taking in due consideration the need to strengthen existing centers of excellence; (ii) Grants to be made on the basis of multi-year financing and in amounts consistent with the parameters for minimum and average amounts of the Grants; and (iii) the amounts of the Grants to be adjusted by an official index to be determined by the Borrower in order to achieve the objectives of the Sub-projects.

(d) Without limitation to the provisions of paragraph (c) above, the Borrower shall: (i) establish, not later than two months after the Effective Date, a high-level technical advisory committee, composed of experts with qualifications and experience satisfactory to the Bank, to appraise and recommend the approval of metrology Sub-projects under Part A (10) of the Project; and (ii) require the proposals for such Sub-projects to include information on, and such appraisals and recommendations to take into account: (A) the availability of technical staff by the proposed Beneficiary in adequate numbers and with the required qualifications; and (B) the strategies and actions to be taken (including improvement of management and recruitment and training of qualified staff) to improve the quality of the services provided by the proposed Beneficiary.

(e) The Borrower undertakes to maintain, with functions and other terms of reference satisfactory to the Bank, a review and advisory board (GEA) in charge of examining and formulating recommendations on the carrying out of the Project.

(f) The Borrower shall cause the Entities, in accordance with the provisions of the PADCT II Guidelines and Sub-program Proposals, to act as the Borrower's agencies for providing Grants. For this purpose, without limitation to the provisions of paragraph (a) above, the Borrower, through the Treasury, shall, in each fiscal year, make available the funds, either originating from the proceeds of the Loan or from the Borrower's budget, required to be transferred to the Entities for the financing of Sub-projects, in accordance with, and within the periods of time set forth in, the relevant Plano de Aplicacao.

(g) Except as the Bank may otherwise agree, the Borrower shall not amend, modify or waive any provision of the PADCT II Guidelines and Sub-program Proposals.

(h) The Borrower shall maintain contractual arrangements, satisfactory to the Bank, with FINEP and CNPQ (the Contractual Arrangements) for purposes of governing the respective participation of FINEP and CNPQ in the execution of the Project in accordance with the provisions of this Agreement and the PADCT II Guidelines, such arrangements to provide, inter alia, that FINEP and CNPQ shall carry out the obligations set forth in Sections 9.04, 9.05, 9.06, 9.07 and 9.08 of the General Conditions (relating to insurance, use of goods and services, plans and schedules, records and reports and maintenance) in respect of their respective participation in the carrying out of the Project.

Section 3.02. (a) The Borrower undertakes that, unless the Bank shall otherwise agree, Grants shall be made on terms whereby the Entity shall obtain, by written contract with the Beneficiary or by other appropriate legal means, rights adequate to protect the interests of the Bank and the Borrower, including the right to:

(i) require the Beneficiary to carry out and operate the Sub-project with due diligence and efficiency and in accordance with sound

scientific, technological, administrative and financial
practices and to maintain adequate records;

(ii) require that: (A) the goods, works and services to be financed out of the proceeds of the Loan shall be procured in accordance with the provisions of Schedule 4 to this Agreement; and (B) such goods, works and services shall be used exclusively in the carrying out of the Sub-project;

(iii) inspect, by itself or jointly with representatives of the Bank if the Bank shall so request, such goods and facilities included in the Sub-project, the operation thereof, and any relevant records and documents;

(iv) require that: (A) the Beneficiary shall take out and maintain with responsible insurers such insurance, against such risks and in such amounts, as shall be consistent with sound business practice; and (B) without any limitation upon the foregoing, such insurance shall cover hazards incident to the acquisition, transportation and delivery of goods financed out of the proceeds of the Loan to the place of use or installation, any indemnity thereunder to be made payable in a currency freely usable by the Beneficiary to replace or repair such goods;

(v) obtain all such information as the Bank or the Borrower shall reasonably request relating to the foregoing and to the administration, operations and financial condition of the Beneficiary and to the benefits to be derived from the Sub-project; and

(vi) suspend or terminate the right of the Beneficiary to the use of the proceeds of the Loan upon failure by such Beneficiary to perform its obligations under its contract with the Entity.

(b) The Borrower shall cause the Entity to exercise its rights in relation to each Sub-project in such manner as to: (i) protect the interests of the Bank and the Borrower; (ii) enable the Borrower to comply with its obligations under this Agreement; and (iii) achieve the purposes of the Project.

Section 3.03. Except as the Bank shall otherwise agree, procurement of the goods, works and consultants' services required for the Project and to be financed out of the proceeds of the Loan shall be governed by the provisions of Schedule 4 to this Agreement.

Section 3.04. The Borrower, through SCT, shall: (i) cause the study under Part B (1) of the Project to be carried out in accordance with terms of reference and a detailed work program satisfactory to the Bank; (ii) afford the Bank a reasonable opportunity to comment on the draft of such study; (iii) take into consideration the Bank's comments; (iv) complete such study not later than six months after the date of this Agreement; and (v) promptly inform the Bank of all such action as the Borrower shall take based on the recommendations of such study.

Section 3.05. The Borrower, through SCT, shall: (i) cause the study under Part B (2) of the Project to be carried out under the supervision of an independent commission composed of persons, the majority of whom shall not be employees of the direct administration of the Borrower (administracao federal direta), with experience and qualifications, and under terms of reference and detailed work program satisfactory to the Bank; (ii) afford the Bank a reasonable opportunity to comment on the interim and final drafts of such study; (iii) take into consideration the Bank's comments; (iv) complete such study not later than October 30, 1992; and (v) promptly inform the Bank of all such action as the Borrower shall take based on the recommendations of such study.

Section 3.06. (a) Without limitation or restriction to the provisions of Section 9.01 of the General Conditions, on the date falling on the second year after the date of this Agreement, or when an amount of the Loan equivalent to 60% thereof shall have been committed by the Borrower to pay expenditures under the Project, whichever comes first, the Borrower and the Bank shall review,

on the basis of criteria satisfactory to the Bank, the progress achieved by the Borrower in the execution of the Project.

(b) For the purposes of the review referred to in paragraph (a) above, the Borrower shall furnish to the Bank one month prior to such review a report, which shall include the comments of GEA thereon, on the progress and achievement of the objectives of the Project by such date.

(c) The Borrower shall make such modifications in the PADCT II Guidelines and Sub-program objectives and such reallocation of funds among the Sub-programs as the Bank may reasonably request, as a result of the review referred to in paragraph (a) above, in order that the objectives of the Project be achieved.

Section 3.07. The Borrower shall, not later than May 30 of each year during the execution of the Project, starting on May 30, 1991, prepare and send to the Bank a report, in such detail as the Bank shall reasonably request, on the sources and uses of funds, and allocation of funds and expenditures in the areas of science and technology research in Brazil, including PADCT II.

Section 3.08. The Borrower shall take or cause to be taken all such action as shall be necessary to enable the importation of goods under the Project to be carried out in a timely manner, including, inter alia, taking appropriate action, through SCT, to ensure that FESA is operated in such manner as to permit the carrying out of such importation.

ARTICLE IV

Financial and Other Covenants

Section 4.01. (a) The Borrower shall, through SCT and CAPES, maintain, and cause FINEP and CNPQ to maintain separate records and accounts adequate to reflect in accordance with sound accounting practices the operations, resources and expenditures in respect of the Project of SCT, CAPES, FINEP and CNPQ.

(b) The Borrower shall:

(i) have the records and accounts referred to in paragraph (a) of this Section including those for the Special Accounts for each fiscal year audited, in accordance with appropriate auditing principles consistently applied, by independent auditors acceptable to the Bank;

(ii) furnish to the Bank as soon as available, but in any case not later than six months after the end of each such year, the report of such audit by said auditors, of such scope and in such detail as the Bank shall have reasonably requested; and

(iii) furnish to the Bank such other information concerning said records and accounts and the audit thereof as the Bank shall from time to time reasonably request.

(c) For all expenditures with respect to which withdrawals from the Loan Account were made on the basis of statements of expenditure, the Borrower shall:

(i) maintain or cause to be maintained, in accordance with paragraph (a) of this Section, records and accounts reflecting such expenditures;

(ii) retain, until at least one year after the Bank has received the audit report for the fiscal year in which the last withdrawal from the Loan Account or payment out of the Special Accounts was made, all records (contracts, orders, invoices, bills, receipts and other documents) evidencing such expenditures;

(iii) enable the Bank's representatives to examine such records; and

(iv) ensure that such records and accounts are included in the annual

audit report of such audit as to whether the statements of year, together with the proce-dures their preparation, can be relied upon to withdrawals. referred to in paragraph (b) of this Section and that the report of such audit contains a separate opinion by said auditors as to whether the statements of expenditure submitted during such fiscal year, together with the proce-dures and internal controls involved in their preparation, can be relied upon to support the related withdrawals.

ARTICLE V

Remedies of the Bank

Section 5.01. Pursuant to Section 6.02 (k) of the General Conditions, the following additional events are specified:

(a) CNPQ or FINEP shall have failed to perform any of their respective obligations under the Contractual Arrangements;

(b) the Borrower or any authority having jurisdiction shall have taken any action for the dissolution or disestablishment of CNPQ or FINEP or for the suspension of the operations of any of them.

Section 5.02. Pursuant to Section 7.01 (h) of the General Conditions, the following additional event is specified, namely, that any event specified in paragraph (a) or (b) of Section 5.01 of this Agreement shall occur and shall continue for a period of sixty days after notice thereof shall have been given by the Bank to the Borrower.

ARTICLE VI

Effective Date; Termination

Section 6.01. The following events are specified as additional conditions to the effectiveness of the Loan Agreement within the meaning of Section 12.01 (c) of the General Conditions:

(a) the Loan Agreement has been duly registered by the Central Bank;

(b) the Contractual Arrangements have been duly signed and authorized by the parties thereto;

(c) the counterpart funds required to carry out the activities during the first year of the Project shall have been allocated in terms consistent with the estimated costs therefor in the 1991 budget of the Borrower;

(d) the terms of reference and work program, satisfactory to the Bank, for the study under Part B (1) of the Project have been furnished to the Bank;

(e) the terms of reference, satisfactory to the Bank, for the study under Part B (2) of the Project have been furnished to the Bank; and

(f) the members of the commission referred to in Section 3.05 of this Agreement have been duly appointed.

Section 6.02. The following are specified as additional matters, within the meaning of Section 12.02 (c) of the General Conditions, to be included in the opinion or opinions to be furnished to the Bank:

(a) that the Loan Agreement has been duly registered by the Central Bank;

(b) that the Contractual Arrangements have been duly authorized by the parties thereto and are legally valid and binding upon them in accordance with their terms; and

(c) that all necessary acts, consents and approvals to be performed or given by the Borrower, its political subdivisions or agencies, or otherwise to be performed

or given in order to authorize the carrying out of the Project and to enable the Borrower to perform its obligations pursuant to this Agreement, together with all necessary powers and rights in connection therewith, have been performed or given.

Section 6.03. The date of May 15, 1991 is hereby specified for the purposes of Section 12.04 of the General Conditions.

ARTICLE VII

Representative of the Borrower; Addresses

Section 7.01. Except as provided in Section 2.08 of this Agreement, the Minister of Economy, Finance and Planning of the Borrower is designated as representative of the Borrower for the purposes of Section 11.03 of the General Conditions.

Section 7.02. The following addresses are specified for the purposes of Section 11.01 of the General Conditions:

For the Borrower:

Ministerio da Economia, Fazenda e Planejamento
Edificio do Ministerio da Economia,
Fazenda e Planejamento
Esplanada dos Ministerios - Bloco P
70.048 - Brasilia, DF
Brasil

Cable address:

MINIFAZ

Telex:

611506 MFAZ BR

Telefacsimile:

61 226-2502

With copies to:

Departamento de Assuntos Internacionais
do Ministerio da Economia, Fazenda e Planejamento
Esplanada dos Ministerios - Bloco K - 5o andar
70.063 - Brasilia, DF
Brasil

Cable Address:

DEAIN/MEFP

Telex:

611146 SPPR BR

612207 SPPR BR

Secretaria da Ciencia e Tecnologia da Presidencia
da Republica
Edificio da Secretaria da Ciencia e Tecnologia
Esplanada dos Ministerios - Bloco E - 4o andar
70.062 - Brasilia, DF
Brasil

Cable Address:

SCT/PR

Telex:

612858 SCTR BR

613886 SCTR BR

Telefacsimile:

61 223-0564

61 226-1257

For the Bank:

International Bank for
Reconstruction and Development
1818 H Street, N.W.
Washington, D.C. 20433
United States of America

Cable address:

INTBAFRAD
Washington, D.C.

Telex:

248423 (RCA)
82987 (FTCC)
64145 (WUI) or
197688 (TRT)

IN WITNESS WHEREOF, the parties hereto, acting through their duly authorized representatives, have caused this Agreement to be signed in their respective names in the District of Columbia, United States of America, as of the day and year first above written.

FEDERATIVE REPUBLIC OF BRAZIL

By /s/ Helio Gil Gracindo

Authorized Representative

INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

By /s/ S. Shahid Husain

Regional Vice President
Latin America and the Caribbean

SCHEDULE 1

Withdrawal of the Proceeds of the Loan

1. The table below sets forth the Categories of items to be financed out of the proceeds of the Loan, the allocation of the amounts of the Loan to each Category and the percentage of expenditures for items so to be financed in each Category:

Category	Amount of the Loan Allocated (Expressed in Dollar Equivalent)	% of Expenditures to be Financed
(1) Goods, works, consultants' services and training for Sub-projects under the following Sub-programs:		
(a) Biotechnology	22,900,000)	
(b) Chemistry and chemical engineering	28,900,000)	
(c) Geosciences and mineral technology	18,400,000)	100% of foreign expenditures and
(d) Instrumentation	8,300,000)	25% of local expenditures

(e) Science education	9,200,000)	
(f) Science planning and management	2,300,000)	
(g) Science equipment maintenance	3,800,000)	
(h) Science consumables and reagents	3,500,000)	
(i) Science information	1,900,000)	100% of foreign expenditures and
(j) Basic industrial technology	18,200,000)	25% of local expenditures
(k) New materials	24,900,000)	
(l) Environmental science	6,800,000)	
(2) Administration costs for Project monitoring and supervision	500,000	100% of foreign expenditures
(3) Study under Part B (1) of the Project	200,000	100% of foreign expenditures and 25% of local expenditures
(4) Study under Part B (2) of the Project	200,000	100% of foreign expenditures
	<hr/>	
TOTAL	150,000,000	=====

2. For the purposes of this Schedule:

(a) the term "foreign expenditures" means expenditures in the currency of any country other than that of the Borrower for goods or services supplied from the territory of any country other than that of the Borrower; and

(b) the term "local expenditures" means expenditures in the currency of the Borrower or for goods or services supplied from the territory of the Borrower.

3. Notwithstanding the provisions of paragraph 1 above, no withdrawals shall be made in respect of:

(a) payments made for expenditures prior to the date of this Agreement, except that withdrawals, in an aggregate amount not exceeding the equivalent of \$200,000, may be made in respect of Category (3) of the table in paragraph 1 of this Schedule on account of payments made for expenditures before that date but after September 1, 1990; and

(b) payments made for expenditures under Category (4) of the table in paragraph 1 of this Schedule, unless the Borrower has furnished to the Bank a detailed work program, satisfactory to the Bank, for the study under Part B (2) of the Project.

4. Unless the Bank shall otherwise agree, withdrawal applications shall be consolidated so as to apply for withdrawals from the Loan Account of aggregate amounts of not less than \$150,000 equivalent.

SCHEDULE 2

Description of the Project

The main objective of the Project is to consolidate and extend the gains made under the Prior Project in: (i) strengthening research capacity in specific science areas including human resource development; and (ii) institutional reform by decentralizing science decision-making, including using peer review mechanisms for selecting Sub-projects. A second objective of the Project is to strengthen the policy decision-making processes and management of the Borrower's science and technology sector as well as to help improve the environment for technological innovation in the private sector.

The Project consists of the following parts, subject to such modifications thereof as the Borrower and the Bank may agree upon from time to time to achieve such objectives:

Part A: Sub-projects

This part of the Project consists in the carrying out of Sub-projects within PADCT II in any of the Sub-programs in the following areas: (1) biotechnology; (2) chemistry and chemical engineering; (3) geoscience and mineral technology; (4) instrumentation; (5) science education; (6) science planning and management; (7) science equipment maintenance; (8) science consumables and reagents; (9) science information; (10) basic industrial technology; (11) new materials; and (12) environmental science, such Sub-projects to provide for some or all of the following: scholarships for under-graduate, graduate and post-graduate training in Brazil and abroad, training programs for practicing researchers and technicians, visiting professorships, seminars, information centers, refurbishing of laboratories, purchase of equipment and materials to strengthen research and training, and hiring of support and other staff to implement specific research and training programs.

Part B: Studies

(1) A study to review key issues for the Borrower's science and technology sector, including those related to: (i) the long-term role of science and technology in the country's economic development; (ii) improving management, organization and decision-making in the sector; and (iii) improving the environment for technological innovation in the private sector.

(2) A study to review issues related to, and to propose actions for, increasing Brazil's industrial competitiveness through the improvement of quality and productivity in industry.

* * *

The Project is expected to be completed by June 30, 1995.

SCHEDULE 3

Amortization Schedule

Date Payment Due	Payment of Principal (expressed in dollars)*
On each April 1 and October 1 beginning April 1, 1996 through October 1, 2005	7,500,000

* The figures in this column represent dollar equivalents determined as of the respective dates of withdrawal. See General Conditions, Sections 3.04 and 4.03.

Premiums on Prepayment

Pursuant to Section 3.04 (b) of the General Conditions, the premium payable on the principal amount of any maturity of the Loan to be prepaid shall be the percentage specified for the applicable time of prepayment below:

Time of Prepayment	Premium
	The interest rate (expressed as a percentage per annum) applicable to the Loan on the day of prepayment multiplied by:
Not more than three years before maturity	0.20
More than three years but not more than six years before maturity	0.40
More than six years but not more than 11 years before maturity	0.73
More than 11 years but not more than 13 years before maturity	0.87
More than 13 years before maturity	1.00

SCHEDULE 4

Procurement and Consultants' Services

Section I. Procurement of Goods and Works

Part A: International Competitive Bidding

1. Except as provided in Part C hereof, goods shall be procured under contracts awarded in accordance with procedures consistent with those set forth in Sections I

and II of the "Guidelines for Procurement under IBRD Loans and IDA Credits" published by the Bank in May 1985 (the Guidelines).

2. To the extent practicable, contracts for goods shall be grouped in bidding packages estimated to cost the equivalent to \$250,000 or more so as to permit international competitive bidding.

Part B: Preference for Domestic Manufacturers

In the procurement of goods in accordance with the procedures described in Part A hereof, goods manufactured in Brazil may be granted a margin of preference in accordance with, and subject to, the provisions of paragraphs 2.55 and 2.56 of the Guidelines and paragraphs 1 through 4 of Appendix 2 thereto, provided, however, that:

1. All bidding documents for the procurement of goods shall clearly indicate any preference which would be granted, the information required to establish the eligibility of a bid for such preference and the following methods and stages that will be followed in the evaluation and comparison of bids.

2. After evaluation, responsive bids will be classified in one of the following two groups:

(1) Group A: bids offering goods manufactured in Brazil if the bidder shall have established to the satisfaction of the Borrower and the Bank that such goods contain components manufactured in Brazil equal to at least 50% of the value of the complete goods.

(2) Group B: bids offering any other goods.

3. In order to determine the lowest evaluated bid of each group, all evaluated bids in each group shall first be compared among themselves, without taking into account customs duties and other import taxes levied in connection with the importation, or the sales and similar taxes levied in connection with the sale or delivery of the goods pursuant to the bids. Such lowest evaluated bids shall then be compared with each other, and if, as a result of this comparison, a bid from group A is the lowest, it shall be selected for the award.

4. If, as a result of the comparison under paragraph 3 above, the lowest evaluated bid is a bid from group B, all group B bids shall be further compared with the lowest evaluated bid from group A after adding: (i) to the evaluated bid price of goods to be imported in each group B bid an amount equal to the smaller of: (A) the amount of customs duties and other import taxes which a non-exempt importer would have to pay for the importation of the goods offered in such group B bid or (B) 15% of the c.i.f. bid price of such goods; and (ii) to the ex-factory bid price of goods supplied domestically offered in each group B bid an amount equal to the smaller of: (A) the amount of customs duties and other import taxes which would be levied on the goods offered in such group B if they originated from the same foreign country as the bid included in group B which enjoys the lowest customs duties and other import taxes, or (B) 15% of the ex-factory bid price of such goods. If, as a result of this comparison, the bid from group A is the lowest, it shall be selected for the award; if not, the lowest evaluated bid from group B, as determined under paragraph 3 above, shall be selected for the award.

Part C: Other Procurement Procedures

1. Goods, estimated to cost less than the equivalent of \$250,000 but more than the equivalent of \$25,000, and civil works may be procured under contracts awarded on the basis of competitive bidding advertised locally, in accordance with procedures satisfactory to the Bank.

2. Contracts for goods estimated to cost the equivalent of \$25,000 or less may be awarded under the procurement procedures referred to in paragraph 3.4 of the Guidelines.

3. Contracts for specialized equipment provided by a limited number of suppliers,

not exceeding in the aggregate the equivalent of \$34,300,000, may be awarded under the procurement procedures referred to in paragraph 3.2 of the Guidelines.

4. Goods which are proprietary in nature, not exceeding in the aggregate the equivalent of \$6,200,000, may be purchased directly from the supplier.

Part D: Review of Procurement Decisions by the Bank

1. Review of invitations to bid and of proposed awards and final contracts:

(a) With respect to: (i) each contract to be awarded pursuant to the provisions of Part C.3 of this Section and costing the equivalent of \$250,000 or more or Part A of this Section, and (ii) the first two contracts for goods to be awarded pursuant to the provisions of Part C.1 of this Section, the procedures set forth in paragraphs 2 and 4 of Appendix 1 to the Guidelines shall apply. Where payments for any such contracts are to be made out of the proceeds of CESA or FESA, such procedures shall be modified to ensure that the two conformed copies of the contract required to be furnished to the Bank pursuant to said paragraph 2 (d) shall be furnished to the Bank prior to the making of the first payment out of CESA or FESA in respect of such contract.

(b) With respect to each contract not governed by the preceding paragraph, the procedures set forth in paragraphs 3 and 4 of Appendix 1 to the Guidelines shall apply. Where payments for such contract are to be made out of CESA or FESA, such procedures shall be modified to ensure that the two conformed copies of the contract together with the other information required to be furnished to the Bank pursuant to said paragraph 3 shall be furnished to the Bank as part of the evidence to be furnished pursuant to paragraph 4 of Schedule 5 to this Agreement.

(c) The provisions of the preceding subparagraph (b) shall not apply to contracts on account of which the Bank has authorized withdrawals from the Loan Account on the basis of statements of expenditure.

2. The figure of 15% is hereby specified for purposes of paragraph 4 of Appendix 1 to the Guidelines.

Part E: Other

For purposes of this Schedule and the Guidelines, the term "customs duties and other import taxes" includes the FSRMM.

Section II. Employment of Consultants

In order to assist the Borrower and the Entities in the carrying out of the Project and the Beneficiaries in the carrying out of their Sub-projects, the Borrower, the Entities or the Beneficiaries, as the case may be, shall employ consultants whose qualifications, experience and terms and conditions of employment shall be satisfactory to the Bank, such consultants shall be selected in accordance with principles and procedures satisfactory to the Bank on the basis of the "Guidelines for the Use of Consultants by World Bank Borrowers and by The World Bank as Executing Agency" published by the Bank in August 1981.

SCHEDULE 5

Special Accounts: CESA and FESA

1. For the purposes of this Schedule:

(a) the term "Eligible Categories" means Categories (1) and (2) set forth in the table in paragraph 1 of Schedule 1 to this Agreement;

(b) the term "Eligible Expenditures" means expenditures in respect of the reasonable cost of goods and services required for the Project and to be financed out of the proceeds of the Loan allocated from time to time to the Eligible Categories in accordance with the

provisions of Schedule 1 to this Agreement; and

(c) the term "Authorized Allocation" means an amount equivalent to \$18,000,000 to be withdrawn from the Loan Account and deposited into CESA and FESA (\$6,000,000 equivalent into CESA and \$12,000,000 equivalent into FESA) pursuant to paragraph 3 (a) of this Schedule.

2. Except as the Bank shall otherwise agree, payments out of CESA and FESA, as the case may be, shall be made exclusively for Eligible Expenditures in accordance with the provisions of Section 2.02 of this Agreement and of this Schedule. Withdrawals from CESA or FESA shall be made on the basis of evidence that the Bank shall have reasonably determined. For each such withdrawal, the Central Bank or the Account Bank, as the case may be, shall debit or cause to be debited, CESA or FESA, as appropriate, with the dollar equivalent of the amount of the Eligible Expenditures in question in Cruzeiros, in the case of CESA, or the actual dollar amount, or the dollar equivalent of the Eligible Expenditures in currencies other than dollars or Cruzeiros, in the case of FESA.

3. After the Bank has received evidence satisfactory to it that CESA or FESA have been duly opened, withdrawals of the Authorized Allocation and subsequent withdrawals to replenish CESA or FESA shall be made as follows:

(a) For withdrawals of the Authorized Allocation, the Borrower shall furnish to the Bank a request or requests for a deposit or deposits which do not exceed the aggregate amount of the Authorized Allocation. On the basis of such request or requests, the Bank shall, on behalf of the Borrower, withdraw from the Loan Account and deposit into CESA or FESA, as the case may be, such amount or amounts as the Borrower shall have requested.

(b) (i) For replenishment of CESA or FESA, the Borrower shall furnish to the Bank requests for deposits into CESA or FESA at such intervals as the Bank shall specify.

(ii) Prior to or at the time of each such request, the Borrower shall furnish to the Bank the documents and other evidence required pursuant to paragraph 4 of this Schedule for the payment or payments in respect of which replenishment is requested. On the basis of each such request, the Bank shall, on behalf of the Borrower, withdraw from the Loan Account and deposit into CESA or FESA, as the case may be, such amount as the Borrower shall have requested and as shall have been shown by said documents and other evidence to have been paid out of CESA or FESA, as the case may be, for Eligible Expenditures.

All such deposits shall be withdrawn by the Bank from the Loan Account under the respective Eligible Categories, and in the respective equivalent amounts, as shall have been justified by said documents and other evidence.

4. For each payment made by the Borrower out of CESA or FESA, as the case may be, the Borrower shall, at such time as the Bank shall reasonably request, furnish to the Bank such documents and other evidence showing that such payment was made exclusively for Eligible Expenditures.

5. Notwithstanding the provisions of paragraph 3 of this Schedule, the Bank shall not be required to make further deposits into CESA or FESA:

(a) if, at any time, the Bank shall have determined that all further withdrawals should be made by the Borrower directly from the Loan Account in accordance with the provisions of Article V of the General Conditions and paragraph (a) of Section 2.02 of this Agreement; or

(b) once the total unwithdrawn amount of the Loan allocated to the Eligible Categories, less the amount of any outstanding special commitment entered into by the Bank pursuant to Section 5.02 of the General Conditions with respect to the Project, shall be equal to the equivalent of twice the amount of the Authorized Allocation.

Thereafter, withdrawal from the Loan Account of the remaining unwithdrawn amount of the Loan allocated to the Eligible Categories shall follow such procedures as the Bank shall specify by notice to the Borrower. Such further withdrawals shall be made only after and to the extent that the Bank shall have been satisfied that all such amounts remaining on deposit in CESA or FESA, as the case may be, as of the date of such notice will be utilized in making payments for Eligible Expenditures.

6. (a) If the Bank shall have determined at any time that any payment out of either CESA or FESA: (i) was made for an expenditure or in an amount not eligible pursuant to paragraph 2 of this Schedule; or (ii) was not justified by the evidence furnished to the Bank, the Borrower shall, promptly upon notice from the Bank: (A) provide such additional evidence as the Bank may request; or (B) deposit into CESA or FESA (or, if the Bank shall so request, refund to the Bank) an amount equal to the amount of such payment or the portion thereof not so eligible or justified. Unless the Bank shall otherwise agree, no further deposit by the Bank into CESA and FESA shall be made until the Borrower has provided such evidence or made such deposit or refund, as the case may be.

(b) If the Bank shall have determined at any time that any amount outstanding in either CESA or FESA will not be required to cover further payments for Eligible Expenditures, the Borrower shall, promptly upon notice from the Bank, refund to the Bank such outstanding amount.

(c) The Borrower may, upon notice to the Bank, refund to the Bank all or any portion of the funds on deposit in CESA or FESA.

(d) Refunds to the Bank made pursuant to paragraphs 6 (a), (b) and (c) of this Schedule shall be credited to the Loan Account for subsequent withdrawal or for cancellation in accordance with the relevant provisions of this Agreement, including the General Conditions.

