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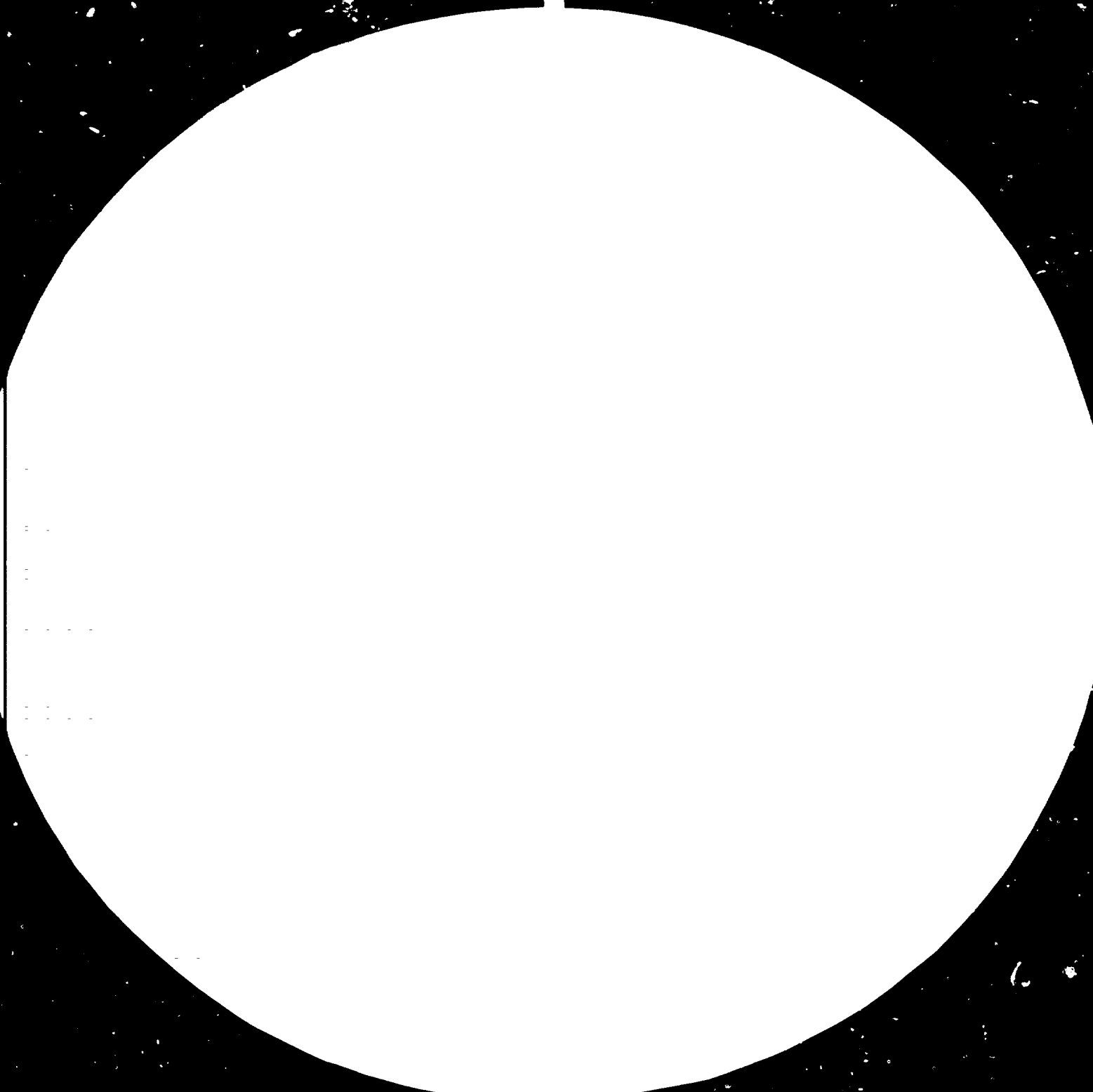
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Preparatory Meeting of Directors of
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on the Creation of a Technological Information
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Bridgetown, Barbados, 26 - 28 January 1982

THE BANK OF THE NORTHEAST OF BRAZIL AS A FINANCING AGENT
IN THE PROCESS OF THE INDUSTRIAL AND
TECHNOLOGICAL DEVELOPMENT OF ITS AREA
(Preliminary version)*

prepared by
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SUMMARY

The present work is a rather brief discussion of the experience undergone by the Bank of the Northeast of Brazil as a financing institution for the industrial development of its area. It studies the implications concerning the technological evaluation of projects which will be presented during the meeting promoted by the United Nations Industrial Development Organization - UNIDO, to be held at Bridgetown, Barbados from January 26 to January 28, 1982.

The content of the ideas and propositions presented here lies in the fact that the Northeast of Brazil is an underdeveloped area where invaluable experience on regional development has been undertaken. And the Bank of the Northeast of Brazil has played a major decisive role as the financing agent of that endeavor.

This document also emphasizes the complementary role played by the Bank concerning its function as a promoter of research commitments specially designed for the pragmatic benefit of the Northeast of Brazil.

1. INDUSTRIAL CREDIT POLICY

The industrial credit policy has contributed essentially to the economic development of the Northeastern States, inasmuch as it supports the formation of capital at the secondary sector as well as at the infrastructure area, tourism and other activities connected with the primary and tertiary sectors.

The role played by the Bank of the Northeast of Brazil (BNB) aims at the development of realistic conditions in all the Areas of the Economy in order to raise the level of income and employment. This effort can be viewed as a supporting device for the implementation of the financing sources of specific projects which interest the area.

In principle, all the industrial enterprises are properly adjusted to fit into our credit lines to obtain the technical assistance which is required by ordinary banking operations of lending and borrowing funds. Although there are occasional variations due to technical adaptations, it is licit to state the priorities that are permanent:

- a) high indicators of financial and economic rentability as well as industrial productivity;
- b) utilization of natural resources;
- c) betterment of technological procedures;
- d) elimination of bottlenecks;
- e) replacement of importations or increase in exportations;
- f) incentives for the development of farming and cattle raising activities or for the industrial growth.

As for activities concerning infrastructure, the sphere of action is very broad inasmuch as they involve public urban works and those in the countryside. They also cooperate with the three levels of Public Administration, namely: the Federal, the State, and the Municipal.

It is necessary to emphasize that the actual influence of the Bank of the Northeast of Brazil (BNB) gains other dimensions such as those devices used to strengthen the national private enterprises. And those dimensions develop capitalization via subscription and integration of shares as well as granting endorsement or guaranty of loans. The BNB also sponsor the issuing of stocks and debentures of firms that play a major role for the economic development of the region.

2. BASIC GUIDELINES

On the basis of its former experience in industrial financing the BNB has oriented its decisions concerning the administration of industrial credit and the basic social infra-structure of this sector in accordance with the following guidelines:

- a) The Industrial Credit operations are governed by the general financing directives approved by the BNB Board of Directors. The aforementioned instructions should follow the BNB Statute as well as the agreements and/or contracts of transfer of funds signed up with other national or foreign institutions.
- b) During the analysis of each operation not only the reputation and experience of the applicant are taken into account, but also the following essential conditions:
 - . The financing operation is to aim at complementing investments concerning the establishment of new firms, extension of the ones already established, replacements or modernization of industrial and touristic endeavors, as well as the financing of basic services and other activities of the Northeastern Region.
 - . The following requirements should be proved important: social and economic relevance of the undertaking, its technical, financial and administrative feasibility, maturity dates, capacity to fulfill obligations, guarantee agreement and the current norms reaching the environmental preservation.
 - . When industrial and touristic undertakings were to be established or replaced as well as infrastructure works were to be undertaken, only applications accompanied by projects which state the background, the goals, the feasibility and the economic value of the enterprise shall be considered.
- c) Loans granted by the BNB shall be carried out under guaranty of loans and/or fiduciary guaranty capable of fulfilling the contract.

- d) When the financing of investments are not self-liquidating their reimbursement must be previously guaranteed by linking the contracted obligations in funds owned by debtors;
- e) Within the maximum of 12 years, the terms of loan granted in the area of Industrial Credit shall be fixed according to each kind of operation bearing in mind the maturity period, the capacity to liquidate the debts and the nature of the undertaking;
- f) Only under exceptional circumstances or in fulfillment of special programs sponsored by Federal Government the terms of loan should exceed the maximum limit of 12 years. In those cases special credit facilities should be adequately utilized;
- g) The participation of the firms with their own funds, already invested or to be invested in the course of the fulfillment of the projects cannot be inferior to 50% of the total investment, except in the case of special programs specifically defined;
- h) In the case of importation of goods and services the amounts borrowed will be normally granted in foreign currency with funds obtained through international financial agencies;
- i) The granting of guaranty of loans for the benefit of industrial firms which are directly financed by suppliers or other international financial institutions is also possible to allow the importation of equipment from foreign countries or to facilitate transfers of funds to national programs of industrial development;
- j) Loan application forms can be submitted either to the BNB operating branch offices or directly to the BNB headquarters;
- l) A final survey of the applications, unless it is a justifiable case according to the regulations of the subject, should be presented in the format of a report. It should discuss the feasibility of the project from legal, administrative, technical and economic perspectives, and end up by concluding as to the importance and convenience of the granting of credit;
- m) The loans will be officially recognized through contracts of opening of credit or industrial bills which will overtly bear their purpose and form of application of funds;
- n) The disbursement of any further parcel after the first one is released will always depend on the documentary evidence of the money spent of the former parcel as well as on the correct and expected application of private funds;
- o) Under exceptional circumstances, the BNB can extend the terms of loan;
- p) Permanent guiding assistance and evaluation of the loans granted in the area of industrial credit are the responsibility of the BNB through qualified divisions of operation or branch offices.

3. THE RENEWING ROLE OF THE BNB

The need for a project such as the systematization of macro and microeconomic data has decisively contributed for the formation of an awareness on the part of the Northeastern enterprisers as to the importance of planning and control of their organizations.

In the beginning, there was lack of global strategies on the part of the enterprisers. The structure of financing did not follow a previous plan and the market fluctuations were completely ignored.

The industrial credit has reacted during these years not only in response to the aforementioned strategies, but also as a catalytic agent toward the formation of enterprisers with a systems approach of what an industrial enterprise should be. The training courses specially designed for director managers of regional enterprises supported by the BNB have also contributed for that formation.

Ever since, the flow of necessary information for the analysis of financing regional projects has become lighter and more flexible enhancing, therefore, a greater operating effectiveness to the BNB programs, and avoiding waste of time to analyse the projects originated by the delay of data from the enterpriser.

4. FOLLOWING THE PROJECTS

The need for a more efficient control of the projects under analysis came up as the universe of the enterprises financed by the BNB was growing with the presence of various problems not only during the stage of implementation but also during the process of operation.

In order to protect the interest of the BNB and avoid failures which would bring negative consequences to the region due to waste of social resources, a system of following assistance was inaugurated in 1966. This was an attempt to make use of a device to act during and after the implementation stage aiming at the identification of distortions and problems.

As an immediate result of those reports we could eliminate one of the bottlenecks in the process of analysis and contracting which decreased from the average of 370 days down to 90 days. We regained the time wasted on the part of the enterpriser and on the part of the BNB as well as by means of training and assistance, and the publication and distribution of manuals on orientation and presentation of projects to the directors and managers of the enterprises. As a result of this measure, we have today a more efficient system of analysis which takes the average of about 35 days.

Furthermore, the technicians of the Industrial Administration could also point out that the main problems during the implementation of projects in the region were:

- a) Deficiency of planning in the form of mistakes and flaws in the original project particularly in relation to the following factors:
 - . market evaluation;
 - . supply of raw materials; and
 - . quality of labor.
- b) Lack of an efficient management of the project originated by the shortage of experience or tradition in the field of work, of technical skill and lack of capacity to redefine the basic equations of the projects when facing the overall economic variations;
- c) Lack of sufficient funds originated by: 1) inflation; 2) withdrawal of bank credit; 3) subcalculation of the financial resources of the projects; 4) lack of private funds on the part of the enterprisers;
- d) Occasional crises in relation to internal recession, weather hazardous changes, Government interferences, etc.

The awareness of those problems was crucial for the diminution of the risks for the Bank loan operations, for the orientation of the enterprisers as to handling their problems, for helping the Federal Government in the formulation of more realistic policies for the Industrial Development as well as for increasing the output-capital ratio in the Region.

5. PROGRAMS AND LINES OF CREDIT

Previous experience and the dynamics of economic activities have often led the BNB to adopt new forms of handling problems in terms of establishing, closing down and changing its Programs and Lines of Credit, mainly because a number of them come from sponsoring institutions which are

responsible for transferring the necessary funds to the final users.

At the moment, the financing role of the Bank can be summarized in the following Programs:

- Pre-investment financing;
- Financing to industries and other regional economic activities;
- Financing to research and production of alternative sources of energy;
- Financing to infrastructure and public works;
- Financing to touristic activities;
- Capitalization of regional enterprises;
- Guaranty of loans.

The First Program comprehends the already existing lines of credit or those which will be eventually established whose purposes are the financing of research programs, surveys, projects or programs of economic and social development all of great interest to the area.

In the Second Program are all the lines of Credit whose purposes are the financing of fixed capital and/or working capital of industrial enterprises and other regional economic activities such as trade and services.

The Third Program brings together the lines of credit which aim at the financing of infrastructure and public works which are directly or indirectly connected with governmental institutions.

The Fourth Program brings together all the operations in the area of tourism and related activities.

The Fifth Program includes the lines of credit that are related to the capitalization of regional enterprises, either in the form of stock-sharing on the part of the BNB or other official financing institutions, or by means of granting credit to shareholders for subscription and integration of stocks of private enterprises in the Northeast.

The Sixth Program comprehends the various forms of possible guaranties to be granted by the Bank in credit operations or the issueing of shares, debentures or debenture stocks.

6. TECHNOLOGICAL ALTERNATIVES

The available research results have shown that the technology of the present processes of production tend to display minimal range of variation when a specific kind of product to be manufactured is determined and quality analyses as well as standardization are carried out at a minimum rate of production. In other words, the available technology would not be too different as far as capital-labor ratio is concerned. As for some sectors (such as chemical and metallurgy as well as paper making) the variations are minimum.

On the other hand, the enterprise decisions in the Northeast of Brazil in view of technological information had been traditionally based on the condition that a new industry should compete with the more advanced industrial systems located in the Brazilian Central and Southern States. This fact had various implications in the process of technical evaluation, of the projects submitted because:

- a) with the development of the internal systems of communication, the demand structure of industrial products should not differ significantly from those located elsewhere in the country. This fact implies that the substitutes of regional importation are supposed to compete in terms of specification, quality and cost with the products manufactured in the South which limits even more the technical possibilities and productive capabilities;
- b) The same reasoning can be applied to the sectors that aim at exporting part of their production either to foreign countries or to the Southern States;
- c) On the whole, the industrial systems in the Northeast have not been properly integrated for they have to import a good number of components they need. This integration is not feasible at the level of very different techniques for it is implied that technical specifications limit the possibilities of selection of technological processes.

These conclusions suggest that the regional industry, in order to be competitive, comes across difficulties in using technological procedures which are very different from those utilized elsewhere in Brazil. Consequently, the projects that have been financially assisted by the Bank have adopted productive and technological procedures already proved technically and economically efficient in the Central and Southern States. Otherwise, they would not have been able to succeed.

However, the BNB, although having to face the aforementioned limitations, could, in these last two decades, guide and support the old-fashioned enterprises to modernize their plants (textile, leather, skins, etc) persuading or discouraging the enterprisers to make up their minds as to the implementation of new industrial endeavors that involved new products and/or renewing technology of products already processed in the region.

The importance of a system of technological communication is unquestionable if one intends to promote the national technological development. As far as the Brazilian situation is concerned, that importance deserves special prominence as it can be seen in some of the passages of the Basic Plan of Scientific and Technological Development.

The Third BPSTD, organized under the coordination of the National Council of Scientific and Technological Development represents a detailed discussion of the topic "Science and Technology of the third National Plan of Development" and, as such, "it explains the governmental policies for the area and guides the decisions to be made during the years of 1980-1985".

Some of the topics about technological information that appear in the text of the third BPSTD are worthy of note:

- "The active and integrated operation of the channels of information in Science and Technology is essential for the scientific and technological development of the country, since it provides the bases for its planning and guiding assistance".
- "It is necessary to form a national conscience as to the importance of the use of information about Science and Technology aiming at the improvement of access devices, storage, and circulation of that information".
- (...) "The implementation of a policy to meet the needs for information about Science and Technology in the Country is anticipated bearing in mind that their resources are scarce and need be rationally administered from an overall perspective. This strategy requires the strengthening of the Brazilian Institute of Information about Science and Technology and of the National Council of Research as a central institution capable of performing decentralized coordination of the activities of information about Science and Technology in the Country".

According to what has been discussed and in relation to possible operational propositions for a System of Technological Information Exchange Network - TIEN, which can be created as suggested by the UNIDO to meet the needs of Industrial Development Financing Institutions - IDFIS, we would suggest, in principle the following form of relationship with the

UNIDO. We understand that the UNIDO would create and coordinate the TIEN and offer its services and forms of exchange to IDFIS.

The UNIDO could establish relations in Brazil not only with the BNB but also with other Brazilian institutions which are more directly involved and probably interested in a system of exchanging technological information. We believe that any kind of relationship to be established with the BNB and/or other institutions will contribute to the consolidation and to a more harmonious and practical growth of science and technology in Brazil.

The Brazilian institutions, besides the BNB, which deserve attention on the part of the UNIDO, are the following:

1. Brazilian Institute of Information about Science and Technology which is controlled by the National Council of Scientific and Technological Development. One of the roles to be played by this Institute is the collecting, analysis, storage and circulation of data of scientific and technological interest;
2. National Institute of Industrial Properties. This Institute has a "Bank of Patents" which is an integral part of the Center of Documentation and Technological Information of that Institute. The "Bank of Patents", inaugurated in 1976, has a mass of 10,000,000 documents, which are at the disposal of the enterprisers and can supply information about technology developed in other countries and whose patents are public ownership in Brazil and, therefore, can be freely copied;
3. Ministry of Foreign Relations. The Department of Culture, Scientific and Technological Cooperation of this Ministry coordinates a sectorial program which collects and circulates information from foreign nations through the System of Scientific and Technological Information.
4. The Brazilian Association of the Institutes of Industrial and Technological Research. This association comprehends at the moment Centers of Research placed in the nine following states of the Country: Rio Grande do Sul, São Paulo, Bahia, Ceará, Pernambuco, Paraná, Rio de Janeiro, Sergipe and Minas Gerais.

As far as suggestions about how the IDFIS operate, we would say that they could contribute more effectively to the strengthening of the technological capacity of the Country. We would like to mention some interesting aspects of the Brazilian experience in this connection which can serve as subsidiary information for the participants of this meeting.

Among several banks which operate in Brazil in this field three main ones are outstanding: the Bank of Brazil, the National Bank of Economic Development and the Bank of the Northeast of Brazil - besides the Financing Institution of Studies and Projects. These banks operate funds and have special programs of financial assistance to projects of technological and scientific development. It should be noted in passing that the UNIDO could make an attempt to establish some kind of relationship with all those institutions besides the BNB through its respective funds and special programs aiming at technological development.

The Bank of Brazil, through the Fund for the Incentive of Technical Scientific Research has allocated funds for the financing of research submitted by small-scale and medium-sized enterprises, institutions of research and universities. For that purpose the Bank of Brazil reserves 2% of its liquid profit for its fund every six months. The National Bank of Economic Development has created the Program for Technological Development aiming at promoting, encouraging and supporting - through financing cooperation - the accomplishment of studies, programs, projects and other activities which aim at the scientific and technological development, the improvement and the transfer of techniques, processes and products as well as the absorption and utilization of technological progress by the national economy.

The Bank of the Northeast of Brazil also has a Fund for Scientific and Technological Development which was created with the objective of giving financial support to projects of economic, agricultural and technological research of interest to the Northeast of Brazil. These projects have been organized by the BNB or submitted by other institutions. The fund also supports training programs for technicians at the level of specialization and graduate courses on the areas of knowledge that are related to the process of development of the area.

Those funds come from a parcel which corresponds up to 5% of the BNB annual liquid profit and from other sources such as funds from contracts and agreements of financing cooperation with national, foreign and international institutions. At present, the majority of the projects which are financed by the BNB's fund is related to farming and cattle-raising and to agricultural and animal husbandry research. The reason why most of the effort is concentrated on technological research of the primary sector is due to the relevance of that sector in the economy of the Northeast where technological improvement generally has a greater and more spreading impact on the structure

of the economy of the region.

Since we have been discussing the main existing funds in Brazil which are sponsored by three great banks to promote scientific and technological development, we would like to take advantage of the opportunity to emphasize in detail the role played by the FUNDECI - Fund for the Scientific and Technological Development of the Bank of the Northeast of Brazil, Corporation.

The BNB founded the FUNDECI in 1971. Its directors were convinced that the economic, agricultural and technological studies and research would contribute for the introduction of innovations, the improvement of processes and products as well as for the betterment of productivity.

The following institutions are eligible to apply for financing cooperation from the BNB/FUNDECI:

- . Universities;
- . Institutes of Research;
- . Other Institutions of Research approved by the BNB.

The orientation is that the projects should be pragmatic so that their results can benefit the enterprisers as soon as possible.

In order to give more precise information about the role played by the BNB/FUNDECI and how varied are the projects of research financed by the Bank we line up some of the works which are about to be fulfilled or have already been completed:

- a) A Program on Fishing Technology which comprehends various projects covering a number of technological research experiments on crustaceans and small fish. Among those research experiments the following could be cited:
 - The use of chemicals on lobster tails to minimize losses during defrosting;
 - The industrial processing of mackerel, tarpon, common bonito, crabs, tarpon eggs, shark and fins.
- b) A Program on Fodder Processing Improvement and Animal Feeding.
- c) Construction of cashew nut-crackers.
- d) Research on Essential vegetable Oils and Fats of the Northeastern flora.
- e) Production of Enzymes to process amidogen substances.
- f) Sunned food experiments.
- g) Hydrologic Research in the Northeast.

- h) Research Program and Propagation of Sorghum Plantation in the Northeast.
- i) Research Program on the Raising of Goats and Sheep in the Northeast.
- j) Research Program on the Cultivation of "Jojoba".
- l) Research and Propagation Program on the Cultivation of Pineapples.

By financing those aforementioned research programs the BNB takes hold of a leading role in the introduction of technological innovations at the productive sectors of the area. Its main goals have been the spreading of recent findings about new products from agricultural and technological programs sponsored and oriented by the Bank. Other programs aiming at the propagation of those findings will be undertaken.

Finally, we would like to recall the responsibility of the Financing Program of Studies and Projects, a branch of the Government Bureau of Planning through its Program of Support to the Technological Development of National Enterprises, which aims at financing the technological development of Brazilian enterprises devoted to the following activities:

- Research and development of new products and processes;
- Implementation of quality control systems;
- Implementation of centers for technological research within the enterprises;
- Absorption and adaptation of foreign technology.

Such projects can be developed either by competent technicians of the enterprises or via the utilization of the existing know-how elsewhere in the Country: Universities, Institutes of Industrial and Technological Research, Counselling Firms, etc. The BNB also acts as a Financing Agent of the aforementioned programs.

7. CONCLUSION

The BNB understands that the cooperation of the UNIDO for the scientific and technological development of Brazil and the Northeast is of paramount importance. For this reason it is willing to analyse and ponder its participation in the Technological Information Exchange Network - TIEN according to the decisions to be made at the meeting to be held in Bridgetown.



