

END OF PROJECT REPORT
INTER-AMERICAN SPECIALIZED CONFERENCE ON THE APPLICATION
OF SCIENCE AND TECHNOLOGY TO DEVELOPMENT (CACTAL)

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Objective

To determine elements and specify activities at both the national and regional levels which would accelerate Latin American development by means of the effective production, adaptation and utilization of science and technology.

Strategy

CACTAL was not to be an end in itself, but rather to serve as an intermediate step linking the stage of study and analysis with that of action.

Activities

1. Prior to the realization of the Conference, the following preparatory activities took place:

- a. The organization of CACTAL was carried out initially by a Special Advisory Committee of high level persons from the member states representing the four key sectors of government, industry, finance, and science and technology.
- b. Based on recommendations of the Special Advisory Committee, the governments were asked to name national committees for CACTAL which would undertake studies and analysis and prepare national documents for presentation to the Conference.
- c. The General Secretariat offered technical assistance to those national committees which so requested. In addition, the Secretariat prepared documentation on pertinent matters of a regional nature.

2. CACTAL was held in Brasilia from May 12-19, 1972, with the participation of 19 member states. Observers were present from 12 non-member states and from 47 national and international organizations, both private and governmental.

3. At the recommendation of CACTAL a meeting of Governmental Experts was held in Washington, D.C. from October 25-November 3, 1972 to: (a) evaluate, review and propose criteria

for restructuring the Regional Program for Scientific and Technological Development, taking national priorities into consideration; and (b) propose the basis for a suggested Integrated Plan for Science and Technology, identifying mechanisms of the inter-American system whose cooperation would be necessary.

Financing

The special grant of \$300 000 from the United States was utilized as follows:

Meeting of Special Advisory Committee	\$ 6 375
Preparatory committee meetings	20 000
Coordination (personnel and travel costs)	74 000
Contracts for studies and analyses	81 000
Assistance to national institutions	20 000
Conduct of CACTAL and post-CACTAL meetings and distribution of documents	<u>98 625</u>
	<u>\$300 000</u>

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RESULTS OF CACTAL TO DATE

1. Reorientation of the Regional Scientific Technological Development Program

CACTAL was held when the Regional Scientific and Technological Development Program (RSTDP) was completing three years of service to the countries. The analysis made in CACTAL consisted fundamentally in a general and detailed discussion as to whether in the coming years the RSTDP, as a fundamental objective, should continue to support the development of national scientific and technological infrastructures; whether, on the other hand, it should direct the activities programmed toward applications of science and technology to overall development and leave it to the countries themselves to develop scientific and technological institutions through their own domestic efforts; or whether to follow a policy that would combine these two extremes, at least in the next few years.

The last policy was the one that was favored; that is, to have the RSTDP continue to support the efforts to develop a scientific and technological structure suited to the needs of the countries and enabling them to carry out projects of pure, applied, and technological research. At the same time, the Program should support any effort that represents the use of this infrastructure in the development of projects that have more or less immediate economic significance and that form an integrated part of the problem of national development.

This orientation has started to be included in the programming of the RSTDP, 1973/74, already approved, and it is being taken very much into account in the programming under way for 1974/76. Some technological activities that are being given special attention are: marine sciences, fisheries, food technology, earthquake-resistant engineering.

2. Resolution of Mar del Plata

Since the funds available to the RSTDP are limited and a very substantial increase is not foreseen in the future, in view of the conditions prevailing in many countries, CIECC, at its Fourth Meeting, held in December 1972 in Mar del Plata, Argentina, conceived of and decided to put into action in 1974/76 a mechanism for financing and operation that would facilitate the inclusion of scientific and technological projects of high economic significance and priority for the countries. This mechanism is explained in the resolution entitled "Resolution of Mar del Plata."

Basically, the so-called special projects (that is, projects of high priority and economic significance) that can be financed with the mechanisms conceived of in Mar del Plata, besides meeting the primary condition of being of concern for speeding up overall national development, should also be multinational and multidisciplinary. Multinationality was considered necessary in order to continue the efforts of inter-American cooperation. The multidisciplinary quality was considered essential, by virtue of the very nature of the projects, and, particularly, it was considered advisable for the purpose of bringing about improved measures of internal coordination within the General Secretariat of the OAS, and, therefore, better use of resources. This last is an aspiration repeatedly expressed by the OAS member states in various official meetings and, particularly, by the US delegations that attended the meeting of the Special Committee to propose measures for restructuring the inter-American system, held in Lima from June 20 through July 13, 1973. A third characteristic is that, in keeping with the principle of international social justice, measures were taken so that every project would call for benefits to the relatively less-developed countries.

3. Transfer of Technology

In CACTAL, the countries also found an appropriate and timely forum for analyzing the process of technological transfer as part of the overall process of technological innovation and technical change and for finding measures to enable this process of transfer to develop under terms most favorable for the region. It was indicated that, besides the fact that existing international agreements and standards did not greatly favor the countries of medium and small development - such as those of Latin America - suitable legislation and certain institutional mechanisms were lacking in the countries to facilitate the transfer. In this last aspect, the OAS was requested to establish programs to aid the countries to introduce information mechanisms, and other programs for the inclusion of foreign technologies that are suitable in their scope, up-to-date in their design, and economically advisable.

Thus it was that the Pilot Project on Transfer of Technology, which has formed part of the RSTDP since January 1, 1973, was put into effect. Within this project, it is proposed to design and test some institutional mechanisms for technical information at national, regional, and world levels. The experiment is also the result of the program for development

of technical information systems, carried out with special funds donated by the United States Government, and with the technical cooperation of the Battelle Memorial Institute. The Pilot Project on Transfer of Technology, which also has special funds donated by the U.S. Government, is under way, and it is hoped that it will produce results in the form of recommendations for national and regional action. To date, the countries have shown a great interest in the project, and very possibly the OAS may report final results at the end of 1973.

4. The Process of Technical Change and Technological Innovation

The countries of the region, several of which are emerging from the stage of industrialization merely for substitution of imported products to a more complex industrialization, designed not only to meet national markets, but also to enable the countries to have a share in high-demand international markets, analyzed the reasons that innovation was unsatisfactory and studied a number of corrective measures. Just as occurred with considerations put forth on the process of technological transfer, in this case it was also recognized that there was a need to improve technical information at the company level and to promote the passage of laws and establishment of a group of measures to stimulate technical change and information. These could include promoting reorientation or refresher courses for technical professionals, conducting certain studies to redirect governmental incentive policies, and institutionalizing incentives that in themselves may be classified as such (credit policies, establishment of development institutes, establishment of quality-control centers, etc.).

In this respect, in the RSTDP and possible as a result of greater knowledge contributed by CACTAL, a growing interest has been observed on the part of the countries in receiving assistance on technical standardization and, in the case of at least two countries, requests have already been received for support to the establishment of quality-control institutions. The RSTDP has included in its approved schedule for 1973/74 projects to support national technical information systems, the holding of seminars on improvement of technical management in business, and studies and analyses of the process of technological transfer -activities that are being increased in the program now in preparation for 1974/76.

5. Scientific and Technological Requirements

The studies carried out within CACTAL and the very experience gained by the General Secretariat in directing and operating the RSTDP have crystallized in the conviction that the establishment of national priorities in science

and technology is a much more complicated process that had previously been thought. For that very reason, and because of the urgent need to conduct programs that will meet the countries' economic and social needs, it would be advisable in practice to confine the programs to one or two economic sectors considered by each country as a priority.

In view of the foregoing, and to make tools available to the countries to enable them to identify scientific and technological projects of significance in one or two priority economic sectors, the RSTDP introduced in its 1973/74 programming (and is accentuating its program for 1974/76) the undertaking of national studies to diagnose the situation in science and technology and, on that basis, to conduct studies on scientific and technological requirements in the priority economic sectors chosen. The diagnoses have already been concluded in several countries and those for requirements in science and technology are under way. It is hoped that at the end of another year, enough information will be available to enable the countries to prepare and present, not only to the Regional Program but also to other cooperating organizations, projects that are better substantiated and more a part of the development problem.

6. Actions on the national scale

The holding of CACTAL gave the countries an opportunity to make an internal analysis of their own situation in science and technology and of the domestic and international cooperation measures most needed. Several countries established national committees of CACTAL, on a more or less permanent basis, and these committees made significant studies of great benefit to the countries that authored them.

This office is consulting the pertinent agencies of the countries and requesting them to send information regarding specific, direct benefits that may be considered as having resulted from CACTAL. As soon as this information is received in the General Secretariat, this office will be very pleased to make it available to the United States Government.