

## GUYANA BECOMES 34th IDB MEMBER NATION

The nation of Guyana today became the 34th member nation of the Inter-American Development Bank.

Guyana's membership became effective when Claude Vibart Worrell, Counselor for Political Affairs of the Embassy of Guyana, signed the Agreement Establishing the Bank in a ceremony at the Pan American Union. Mr. Worrell also deposited an Instrument of Ratification to the Agreement with the OAS Secretariat, thus completing requirements for entry into the Bank.

In a brief speech of welcome to the Bank's new member, Antonio Ortiz Mena, President of the Inter-American Bank said:

"Your entry into the Bank will serve to further strengthen our relations with the English-speaking Caribbean, an association which, though of relatively recent vintage in a formal sense, has added a new dimension to the Bank's experience, increasing the institution's role as an instrument for hemispheric cooperation, thereby improving the conditions for more effective integration, despite differences in historical experience, political structure, cultural characteristics and institutional setting. We feel that there is no essential contradiction between our goal of identifying areas of common interest and in developing cooperative strategies to deal with common problems, on the one hand, and the need to preserve, and mutually benefit from, the rich diversity which characterizes our region, on the other hand."

Participating with Mr. Ortiz Mena in the ceremony was Alejandro Orfila, Secretary-General of the Organization of American States, in whose office the ceremony was held. In formally declaring the entry of Guyana into the Bank, Mr. Ortiz Mena added:

"We feel that the IDB can play a significant role in assisting Guyana in tapping into immense potential in such

fields as agriculture, energy, forestry and fisheries; in the development of the necessary infrastructure, and in the mobilization and training of technical personnel.

"The IDB, as you know, has had considerable experience in these areas and has, in fact, been focusing its operations along much the same lines for the region, as the Government is doing for Guyana.

"During 1975 the Bank stepped up its support for the 15 member countries classified as less developed or of limited markets. These countries received 41 per cent of total approvals in 1975. Of this amount 65 per cent was on concessionary terms, four-fifths of that consisting of foreign exchange commitments. We

Special Operations. Payment to the *paid-in* capital and to the Fund for Special Operations is being made in three equal annual installments, the first of which is being paid at the time the Instrument of Ratification is deposited.

On June 1 the Bank's member countries amended the Agreement Establishing the Bank to enable Guyana, which is not a member of the OAS, to join the Bank. Guyana formally applied for membership in the Bank on September 16, 1975.

Situated in northern South America and fronting on the Atlantic Ocean, Guyana borders on Venezuela, Brazil and Surinam. A former British colony, Guyana gained its independence May 26,



Ceremony at the OAS: Ortiz Mena, Orfila and Claude Vibart Worrell, Representative of Guyana.

recognize the importance given, by your Government to the production of non-traditional food crops and to fisheries, forestry and energy development, and fully support that strategy. We believe that development of these basic industries is a necessary prerequisite for the development of forward agro-industry linkages which could play a major role in diversifying the economy, increasing self-sufficiency, and reducing the rate of unemployment."

In joining the Bank, Guyana will subscribe \$18,577,686 to the Bank's ordinary capital resources—\$4,463,470 in *paid-in* capital and \$14,114,216 in *callable* capital. In addition, Guyana will contribute \$5,280,000 to the Fund for

1966. On February 23, 1970, the nation adopted a republican form of government with a president, prime minister and a national assembly.

Guyana is the fourth new borrowing nation from the Western Hemisphere to join the Bank since it was established in 1959, the three others being Trinidad and Tobago in 1967, and Barbados and Jamaica in 1969.

In addition Canada joined the Bank as a contributing member in 1972 and just this past July 9 nine nations from outside the Western Hemisphere also joined the Bank as contributing members. They are: Belgium, Denmark, Germany, Israel, Japan, Spain, Switzerland, the United Kingdom and Yugoslavia.

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## Latin American Trade Is Positive Factor for U. S., Ortiz Mena Says

Speaking in Cincinnati before a group of bankers, government officials, North American businessmen and the press, Antonio Ortiz Mena, President of the Inter-American Development Bank, pointed out that Latin America's trade relations with the United States is a "very positive factor" in the recovery from the recent economic downturn in U.S. economic activity.

In the 1972-74 period, he said, "total U.S. exports to Latin America rose from \$6.8 billion in 1972 to \$9.4 billion in 1973 and \$15.1 billion in 1974. Although these figures are affected by the inflation of international prices, in real terms they represent a very significant increase which demonstrates the importance of the Latin American market to the United States."

In an address on "The New Era of Economic Development in Latin America and What It Means in Terms of its Relations with the United States," presented before the Cincinnati Council on World Affairs, Mr. Ortiz Mena noted that the profound changes that have occurred in Latin America in the last 20 years have led to the development of "real independence . . . between the two parts of the Western Hemisphere, in which prosperity or depression in one produces correlative effects in the other."

Mr. Ortiz Mena was the guest of honor of the luncheon, held October 26 in the Stouffer's Inn Hotel in celebration of the United Nations' Week.

"We can no longer speak of a more powerful partner who helps the weaker nations for reasons of continental solidarity," he said. "We have reached a turning point in our relationship, where now cooperation is reciprocal and benefits are mutual, where markets are complementary to foster the steady growth of production, and where the managers of financial and capital resources find good opportunities for using these resources more productively, while at the same time contributing to a more assured and economical supply of those raw materials which are essential to the economic development of this Hemisphere."

Over the past 25 years, and particularly the last 15, Mr. Ortiz Mena said, "Latin America's economic and social structure has undergone drastic change that has, in turn, greatly altered our

countries' relations with the rest of the world and particularly with the United States."

This change has been characterized in Latin America by intensive urbanization, rapid industrialization and the emergence of a modern sector in the regional economy, Mr. Ortiz Mena explained.

Urbanization, in turn, has created favorable conditions for the launching of a major effort in the field of education. Industrialization has produced profound changes in the structure of the region's economy, particularly in the largest and most developed countries such as Argentina, Brazil and Mexico, and has made possible development of the steel, non-ferrous metal, chemical and petroleum, forestry, automotive and other key industries. The existence of a modern sector in the regional economy has brought about changes in relations among the Latin American countries, a process that has intensified in recent years.

"Because of the progress attained by Latin America, the region is often described as the 'middle class' of the international community," Mr. Ortiz Mena said. "This is a fair enough evaluation, for although there is still a wide gap between us and the industrial nations, our countries have achieved a level of development which places them in a far more advanced position than that of the other developing regions." Unquestionably," he added, "the attainment of this position is having a profound effect on our relations with the United States."

Mr. Ortiz Mena explained that the present stage of Latin American industrialization which requires the importation of capital goods and industrial outputs is largely responsible for the sharp rise in U.S. exports to the region. Between 1965 and 1973, he said, capital goods purchased by the region jumped from \$1.8 billion to roughly \$3.8 billion, while industrial inputs procured in the United States went from \$1.4 billion to \$3.1 billion. The United States exports to Latin America in these two categories more than doubled over a period of just eight years, reaching almost \$7 billion in 1973.

Mr. Ortiz Mena examined a second aspect of the altered relationship between Latin America and the United States—the

cooperation needed to finance the region's rising level of imports. As the Latin American countries have made progress in expanding and diversifying their exports, he said, imports are continuing to grow at an even more rapid rate. This, in turn, creates balance of payments problems that must be offset by the transfer of external resources.

He pointed out that the net flow of external financing received by Latin America, which averaged approximately \$1.5 billion a year between 1960 and 1966, had risen to a level of more than \$5 billion annually in 1972 and 1973 and to nearly \$8 billion in 1974. Furthermore, whereas in the early 1960s private financing averaged twice that of public funding, this ratio changed so rapidly that by 1973 and 1974 private financing represented approximately 74 per cent of the total.

"The rapid growth in the net flow of private external resources," he said, "can be attributed to two main causes: increasing participation of international private banks in trade financing and expanding direct foreign capital investment.

"Up until 1968, the net balance of banking credit remained at fairly modest levels—under \$150 million—but climbed rapidly thereafter to reach \$2.5 billion in 1974. These figures illustrate the size of the demand for credit to finance Latin American imports."

Mr. Ortiz Mena noted that foreign private capital investments also show a steady upward trend that began about 1967, increasing from a yearly net of approximately \$500 million to \$1.3 billion in 1971-72 and \$1.8 billion in 1973-74.

"This gain reflects an intensive effort to organize companies, primarily in the industrial field, where the movement of United States capital involves the transfer of modern technology," he said.

"Latin America has become a very important destination for U.S. private capital, as demonstrated by the fact that of the cumulative total in the developing world, 70 per cent has been invested in the region, amounting to about \$20 billion by the end of 1974."

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## IDB, OAS, ECLA LEADERS CONFER

Continuing a practice established in previous years, Alejandro Orfila, Secretary General of the Organization of American States (OAS), Enrique Iglesias, Executive Secretary of the Economic Commission for Latin America (ECLA), and Antonio Ortiz Mena, President of the Inter-American Development Bank, met informally at Bank headquarters in Washington, D.C., November 9 and 10. Also participating in the sessions were technical officials of the three agencies.

During the meeting the work programmed for 1977 by each organization was discussed and possible fields of co-

operation in these programs were identified with the objective of avoiding duplication of effort and of thus making their cooperation to the Latin American countries more effective.

The agenda of the talks included an analysis of the socio-economic trends of Latin America in the areas of development, trade, finance and integration, and of regional or international action programs which are under consideration by the Latin American countries or their various agencies. The leaders of the three hemisphere organizations also held private talks.

Views and information were also exchanged on the work being carried out by

ECLA and the OAS, respectively, in preparation for the Biannual Meeting at Ministerial Level to be held in Guatemala in May of 1977, and of the Extraordinary General Assembly on Development Cooperation, scheduled for 1977 although the site and date have not yet been determined.

Jaime Moncayo, Permanent Secretary of the Economic System for Latin America, was invited to attend the meeting but declined because of previous commitments. In the future it is hoped that representatives of other institutions engaged in the economic and social development of Latin America may also participate.

## NEW APPOINTMENTS

Toraio Aoki, the Bank's Executive Director for Israel, Japan, Spain, Switzerland and Yugoslavia, appointed October 28 Ignacio G. Badell of Spain as Alternate Executive Director for this group of countries.

Mr. Badell was born in San Sebastián, Spain, in 1936, and received a Ph.D. in agriculture from the *Universidad de Madrid* in 1961. After serving in private industry, he was named Professor of Construction at the *Escuela Técnica Superior de Ingenieros Agrónomos*. He is the author of numerous technical publi-



cations on the resistance of materials, mechanized agriculture and economy and has contributed widely to specialized newspapers and magazines.

Prior to joining the Bank Mr. Badell had been an Agricultural Attaché of the Spanish Embassy in Washington. Previously he was Chief of the Office of Mechanized Agriculture and Section Chief of the Technical Secretariat of the Ministry of Agriculture in Spain.

### BANK CREATES NEW OFFICE

Antonio Ortiz Mena, President of the Inter-American Development Bank, announced October 15 the creation of the Office of the External Relations Advisor located within the Office of the President. The new office will also include the Office of Information.

To occupy the position of External Relations Advisor, Mr. Ortiz Mena

appointed Marian Anthony Czarnecki, of the United States, who assumed his post November 1.

Mr. Czarnecki has had a long career on the staff of the United States House of Representatives where he served, among other positions, as Consultant to the Subcommittee on Europe, Consultant to the Inter-American Affairs Subcommittee, and Chief of Staff of the International Relations Committee.

Mr. Czarnecki studied liberal arts at Saint Mary's College in Michigan, Marquette University in Wisconsin and George Washington University in Washington, D.C. He is a graduate of the School of Foreign Service of Georgetown University where he also completed the requirements for his Ph.D. in Economics.

## Energy "Miracle" in Paraguay: From 40,000 to 8 Million Kilowatts

Until a decade ago, Paraguay consumed less electricity than any other country in South America. Today, it is rapidly becoming the Southern Cone's bellwether electricity producer. Before another decade passes it will have the highest per capita energy consumption of any country in Latin America and will be that continent's major exporter of electricity, supplying both Argentina and Brazil. What's more, Paraguay is likely to become a hub for energy-intensive industries, both for domestic and international companies.

The driving force of this singular transformation has been the *Administración Nacional de Electricidad (ANDE)*, the national electricity agency formed in 1948. Initially, ANDE grew slowly, but in 1959 the managerial reins were handed to a young Paraguayan who received his doctorate in industrial engineering from the renowned Turín Polytechnic Institute: Enzo Debernardi. Indeed, Paraguay's march toward expanding its energy potential began with Mr. Debernardi's appointment.

Mr. Debernardi, a passionate advocate of hydroelectric power, had from the beginning of his career studied the evolution of his country's rivers, particularly the Acaray and the Monday, and already had gained considerable international and national experience in this field. Thus, it was no surprise that, upon assuming the leadership of ANDE, he headed a "special commission" designed to carry out a project he had already sketched out in his mind in minute detail: the Acaray dam.

To develop the Acaray River as an electric energy producer was becoming both essential and feasible because of the paved road which crossed from one extreme of Paraguay to the other and which united Asunción with the port of Presidente Stroessner. Until 20 years ago, the road only reached the city of Coronel Oviedo, which was the halfway point, and from there to Brazil's frontier its condition was so poor (especially during the rainy season) that it discouraged tourists and transport of regional products.

Thus, the paved road opened the door to tourism and to new settlers who successfully conquered the jungle. Today, agricultural colonies totaling more than 12,000 families and exploiting more than a million acres of land dot the route and industries—sawmills, small storage plants,

oil-extraction plants and sugar mills—have changed the area's physical aspect.

Nonetheless, for Paraguay as a whole, the perspective did not radically improve with this transformation. As industry grew it proved to have an Achilles' heel: Only about 40,000 kilowatts of electricity were available for a country with more than 223,000 square miles of land. Thus, industrial expansion was doomed or was going to be seriously handicapped by the high cost of thermal power produced by fuel imported over Paraguay's extensive river routes. It was against this background that Paraguayan technicians concluded that the only solution to meet the country's energy needs was the Acaray dam.

But to get this project off the ground was still a laborious task. The technicians' first success came when the Government of Paraguay got Brazil interested in conducting jointly with them the technical studies to determine the project's feasibility. These studies—undertaken by Brazil's Department of Sanitation Works in collaboration with Mr. Debernardi and other Paraguayan experts—were completed in 1961.

However, when enthused ANDE officials flew to Washington in an effort to win the backing of the international financial institutions, they were rebuffed. Lacking interest in the project, the institutions said, in effect: "The project is too ambitious for Paraguay . . . Why not construct a thermal power plant?"

But a new financial institution had just opened its doors in Washington—the Inter-American Development Bank. Studies in hand, the ANDE officials visited this brand-new institution, of which Paraguay was a founder. The IDB evaluated the project, and responded favorably. The Bank not only offered to provide part of the necessary funds but also to seek additional financing from other sources to insure the project's success.

This course of action, if successful, would enable the IDB to finance part of a large project and at the same time permit European financial sources, for example, to finance another part of the project in cooperation with the Bank.

To gain the support of both international bankers and equipment suppliers, the IDB mapped out its strategy for the Acaray dam: That is, to transform

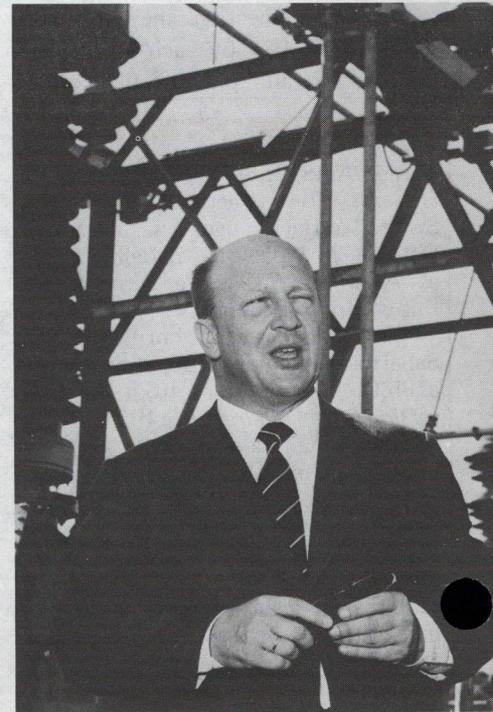
the preliminary study undertaken by ANDE into a model project, backed by the reputation of international consulting firms and endorsed by the Bank.

Bank technical cooperation of \$70,000 extended in 1961 and a loan of \$400,000 approved in 1962 defrayed the cost of the project's feasibility studies and the specifications and designs required to gauge exactly how much the Acaray dam would cost. The Bank then approached the European Common Market's Committee of Policy Coordination and Financial Credit and Exportation, a committee which acts on behalf of Europe's principal suppliers and financial institutions.

A Bank loan of \$14,150,000 helped finance the project and testified to the Bank's faith in the soundness of the plant. Although the Bank's officials were not negotiating on behalf of Paraguay but were simply seeking reactions about the possibility of obtaining European financing, they were, in fact, advocates for the project. And, they were successful, since they not only obtained the necessary financing but received favorable terms as well. For instance, European suppliers of capital goods at that time only provided credits with an amortization period of five years. For the Acaray project, however, they granted 10 years.

In addition, the IDB accepted payment of local currency for the servicing of its loan in order to guarantee the availability of Paraguay's foreign exchange for payment of the suppliers' credit.

Similarly, ANDE played an important



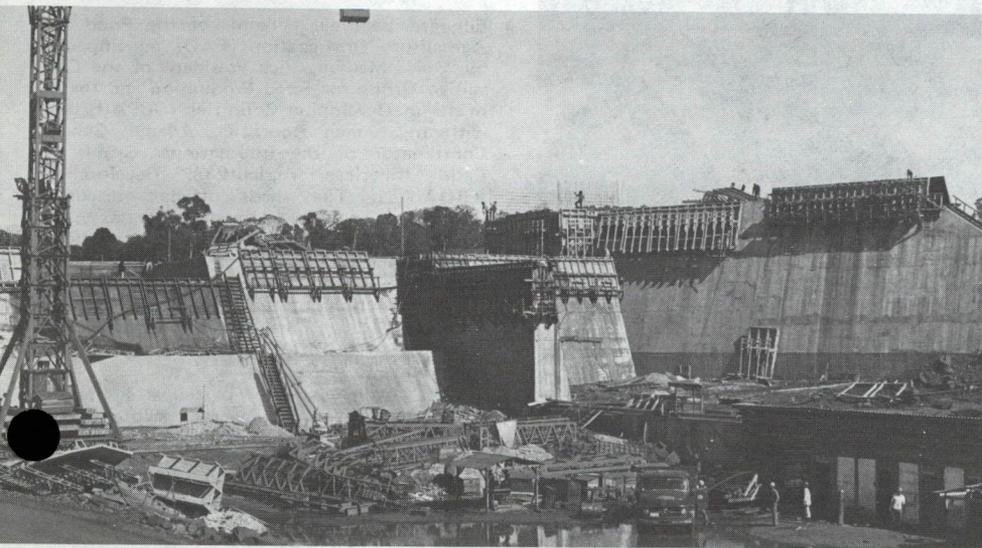
role, since it paid for the project's interconnections, part of the local construction works and 10 per cent of equipment cost, of which the suppliers granted credits for the remaining 90 per cent. Also, ANDE trained its personnel so that they would be able to operate the new plant. As a result of the IDB's support and the help of European financiers and suppliers, work began on the huge hydroelectric project that would be 350 meters wide and 40 meters high and would produce initially 45,000 kilowatts of electric energy.

"The support of the IDB in the development of Paraguay's hydroelectricity was providential," said Alcides Giménez, Chief of ANDE's Department of Studies and Plans and project coordinator. "If Acaray had not existed—a hydroelectric complex which today includes two plants with a capacity of 190,000 kilowatts—the 1974 petroleum crisis would have seriously affected Paraguay as it would not have been able to pay for the imported petroleum required to produce the equivalent energy. Indeed, this would have curbed both the country's electrification and its development."

Eduardo Barros, the Bank's representative in Paraguay, noted that the IDB's participation in the Acaray project had another virtue: It helped ANDE to create the institutional and technical infrastructure that has permitted it to undertake two other giant dams: Itaipú, which will be built in association with Brazil, and Yaciretá, which will be constructed with Argentina.

Producing 12,600,000 kilowatts of electric energy, which is six times greater than Egypt's Aswan dam—Itaipú will be the world's biggest hydroelectric dam and

Debernardi inspecting electric power works, Acaray II during construction; Paraguay develops its energy potential.



will require a \$6 billion investment as well as an enormous human and technical construction effort. Yaciretá, to be erected to the south of Itaipú, will demand a similar effort, as it will produce 4,000,000 kilowatts and require an investment of \$2.5 billion.

The importance of the Acaray plant is evident in the fact that its energy is being used in constructing the Itaipú project and the second stage of the Acaray dam is being elevated five more feet in order to provide more electric power to Itaipú. Once the Itaipú and Yaciretá dams are on stream around 1985, Paraguay's installed capacity of 40,000 kilowatts in 1956 will have jumped to more than 8,000,000 kilowatts. In short, it will have increased its electric power capacity 200-fold in less than 30 years.

When this day arrives, Paraguay will be in a position to export its surplus of electrical energy. To this end, the IDB has financed the installation of transmission lines in Paraguay and granted loans to both Argentina and Brazil to install the interconnection lines needed so that they can purchase Paraguay's energy.

Still, Mr. Debernardi observes that "for Paraguay to be an exporter of electricity is only one phase. The aspiration of President Alfredo Stroessner's Government is to achieve a full national utilization of its energy, not only in industry but also in the total electrification of the country, thus transforming the face of the cities and the life of the countryside."

To meet this aim, ANDE can count on continued Bank support for major works, including electric generation and energy transmission. Meanwhile, ANDE will use its own funds to expand the distribution network in the country's interior.

With an annual electrical energy consumption growth rate of 20 per cent,

Paraguay's goals do not seem impossible. The country's electrification program has already benefitted more than 70 towns and cities in the interior. And, with technical assistance provided by international research institutions, Paraguay is seeking viable projects for energy-intensive industries. Clearly, with the emergence of the energy crisis—few countries are in a position to do the same.

## MEXICO'S OIL PRODUCTION

According to the Annual Report of *Petróleos Mexicanos (PEMEX)*, the price structure of Mexico's petroleum products was modified in 1975, a move which generated the funds needed to maintain a program aimed at covering the country's petroleum and petrochemical requirements. The abundance of crudes produced in excess of existing refining capacity, placed Mexico in a position to export. A total of 38,311 million bbl. of oil was shipped to international markets at a rate of 105,000 bbl. per day, with a value of 5,490,100,000 pesos at the 1975 exchange rate (12.50 pesos to one U.S. dollar). A high 95.4 per cent of the export volume and 99.4 per cent of the value programmed for the year were filled. Total exports from September 1974 to December 1975 amounted to 44.1 million bbl., with a value of 6,263,600,000 pesos.

Rapid oil production growth made it possible to discontinue imports. Mexico was able to join the group of exporting countries due to the output of the Chiapas and Tabasco fields, which as of last February had yield a cumulative 215.7 million bbl. with a value of 29,665,000,000 pesos.

Supplies for the Fula refinery, which at full capacity will use 150,000 bbl. per day, are ensured by domestic production. Optimum operation of the Tula refinery will enable the country to put an end to gasoline, diesel oil and liquefied gas imports. It is foreseen that Mexico will export 8.42 million bbl. of gasoline in the second half of the current year, "a daily average of over 26,000 bbl., in addition to some 87,000 bbl. per day of crude, earning an estimated income of 5,733,000,000 pesos."

Exploration activities were carried out in 23 states and on the Atlantic and Pacific continental shelves; 87 exploratory wells and 266 development wells were drilled during the year.

Output of crude and absorption liquids reached 294.3 million bbl., a 23 per cent rise over 1974 and 66 per cent over 1970.

The Pemex Director General referred to the important production upsurge in Reforma, Chiapas and Samaria, Tabasco areas, which jointly accounted for 53 per cent of national output. "A yield of 390,600 bbl. was obtained in 1972, when the Sitio Grande and Cactus fields were discovered and production initiated; output in 1973 and 1974 stood, respectively, at 10.63 and 62.35 million bbl., climbing to 118.2 million bbl. in 1975 at an average daily rate of 323,835 bbl. There are 50 producing wells in the Sitio Grande, Cactus, Níspero and Río Nuevo fields of Chiapas, yielding 140,400 bbl. a day at an average 2,808 bbl. per well. Another 31 wells in the Samaria, Cunduacán and Iride fields of Tabasco produce 299,800 bbl. a day, at an average 9,672 bbl. The zone's per-well yield is currently 5,435 bbl., 4,529 per cent over the national average of 120 bbl.; the total by the end of February was 440,000 bbl. per day. It is estimated that daily production by the end of the year will reach 530,000 bbl."

Implementation of the Central American post-harvest technology program of the International Group for Agricultural Development in Latin America (IGAD/LA), described in last month's *IDB News*, is proceeding on schedule. Recent discussions in Costa Rica between the Director General of the Inter-American Institute of Agricultural Sciences (IICA) and a representative of IGAD/LA's Coordination Office produced new possibilities for effective coordination.

IICA, like IGAD/LA, also concluded that post-harvest food losses was an important problem in Central America and for 1977 proposed activities complementary to IGAD/LA's own proposal. Therefore, at the meeting in Costa Rica it was agreed that, given the two institutions' mutual interest in the subject and IGAD/LA's role as a coordinating mechanism, the two projects will be merged to widen their scope, avoid duplication, and thus increase the level of overall effectiveness.

A second item discussed in the meeting with IICA covered information systems. IICA is working on this problem both at the regional level and in Central America. In the latter case, the emphasis is on marketing information.

The lack of agricultural information at both the farm and policy level is a

significant barrier to the rapid development of the region's agricultural sector. A proposal covering information on ongoing agricultural research is being prepared for IGAD/LA by the Smithsonian Science Information Exchange in consultation with the United States' Agency for International Development and IICA. IGAD/LA's Working Group is expected to take action in this area in the near future.

As a result of a request by the General Coordinator, nine countries have designated their office of liaison with IGAD/LA. They are: Bolivia, Minister of Agricultural Affairs; Brazil, Under Secretary of Planning and Budget of the Ministry of Agriculture; Costa Rica, Executive Secretary of the National Agricultural Council; Ecuador, Office of International Affairs of the Ministry of Agriculture and Livestock; El Salvador, Technical Director of the Sectorial Office of Agricultural Planning of the Ministry of Agriculture; Guatemala, First Vice-Minister of the Ministry of Agriculture and Livestock; Honduras, Advisor of the Secretary of Natural Resources; Panamá, Assistant Director General of the Bank of Agricultural Development; Peru, Sectorial Office of Food Planning. The other countries will be designating their representatives in the near future.

The Agricultural Research Service (ARS) of the United States Department of Agriculture (USDA) has a special project team studying possible

applications of solar energy in crop drying. A preliminary report written by Mr. James L. Butler, research leader and technical advisor to this project, examines the amount of solar energy available along with a description of methods of collection, areas for application, and the economic costs involved. More detailed information can be obtained by writing directly to the ARS in the United States Department of Agriculture.

Two recent magazine issues are devoted almost exclusively to the world food and agriculture problem. The September edition of the *Scientific American* presents the world food problem in all of its complexity. Dimensions and possible solutions to the food and nutrition problem are presented, while the agricultural sectors of India, Mexico and the United States are examined in greater detail. Given the importance of the subject matter and the comprehensiveness of its coverage, this issue is sure to be of great value for those concerned with the problems of agricultural development and human hunger.

Finally, the November edition of the *National Geographic* contains an article dealing with an area of growing importance—the changing world climate. The article describes temperature changes and shifts in storm tracks and drought belts that have occurred in recent years. It also provides up-to-date information on the scientific search for answers currently in full swing worldwide.



Edouard Saouma, Director of the Food and Agriculture Organization (FAO), accompanied by Moise Mensah, Vice President of the Consultative Group for Food Production and Investments in Developing Countries (GCPAI), talks with Ing. Julián Rodríguez Adame, General Coordinator of the International Group for Latin American Agricultural Development (GIDA/AL). The three officials discussed aspects of the development programs being carried out by their respective organizations. GIDA/AL was established in response to a proposal by the President of the IDB following recommendations of the United Nations Food Conference in Rome which supported the objectives of GCPAI, which was created by the conference.

The Bank is also participating in an FAO/IDB Cooperative Program devoted to the identification and preparation of investment projects for Bank financing in agriculture, forestry and fisheries. The aim of the program, financed by both organizations, is to bring the expertise of FAO into the Bank's investment projects in these fields.

# Bank Extends Loans, Technical Cooperation to Five Countries

The Inter-American Bank in recent weeks authorized loans and technical cooperation for projects in the Dominican Republic, Costa Rica, Ecuador, Haiti, Paraguay, and for a regional program. The details are as follows:

**DOMINICAN REPUBLIC:** The Bank announced October 28 the approval of a \$3.9 million loan to help carry out a second stage in an expansion project of the *Universidad Católica Madre y Maestra (UCMM)*, a private university in the Dominican Republic. The loan will be used by the UCMM to expand and train its faculty, to hire consultants, to acquire teaching and research equipment and to expand its physical plant to facilitate the establishment of health sciences, engineering technology and research programs.

UCMM is located in Santiago de los Caballeros, the Dominican Republic's second largest city, and serves 13 provinces in the northern region of the country, a section currently offering the best prospects for rapid agricultural and industrial development. The total cost of the project is estimated at \$5,650,000.

Although the education sector has made significant progress in the Dominican Republic in the last 15 years, the most notable growth has been in higher education where, between 1960 and 1974, the absolute number of students increased from 3,400 to 36,000. A large percentage of the graduates in 1960-75 obtained degrees in the humanities. Furthermore, most of the students pursuing university studies in Santo Domingo prefer to settle in the capital, whereas 65 per cent of the professionals trained at UCMM have stayed in that region to work.

Execution of the project will help foster regional development by training professionals for the exercise of integral preventive, curative and rehabilitation medicine, by training intermediate professionals to meet the growing demand generated by national industrial and economic development, and by expanding the university's services as an agency of technological innovation and encouraging ties between its faculty and the various sectors, organizations and situations in the country. In addition to the loan, the Bank approved \$210,000 in grant technical cooperation to finance specialized training abroad for full-time UCMM professors.

**COSTA RICA:** The Bank announced October 14 the approval of \$96,000 in grant technical cooperation to establish the bases for an institution to administer water resources in Costa Rica. The technical cooperation will be used to secure the services of the *Secretaría de Recursos Hidráulicos* of Mexico, a specialized national agency with broad experience in water resource management, to prepare a study which will examine alternative agencies that could be established to manage public sector activities in irrigation, drainage and flood control in Costa Rica, specifically taking into account the regional development plans for the Guanacaste area.

Execution of the project, which will be carried out over a 12-month period, will provide Costa Rican authorities with an institution capable of administering the country's water resources and handling irrigation development and irrigation programs and projects in the country. The project's total cost is estimated at \$127,000.

**ECUADOR:** The Bank announced October 20 the approval of \$345,000 in grant technical cooperation to prepare studies relating to the Regional Development Program for Southern Ecuador (PREDESUR). Up to \$240,000 of the technical cooperation will be extended from the resources of the Canadian Project Prepara-

tion Fund and up to the equivalent of \$105,000 in sucres will be extended from the net income of the Fund for Special Operations. The beneficiary will be the Republic of Ecuador and the executing agency will be the Ecuadoran Subcommittee of the Joint Peruvian-Ecuadoran Commission for the Puyango-Tumbes and Catamayo-Chira Basins. The total cost of the project is estimated at \$480,000.

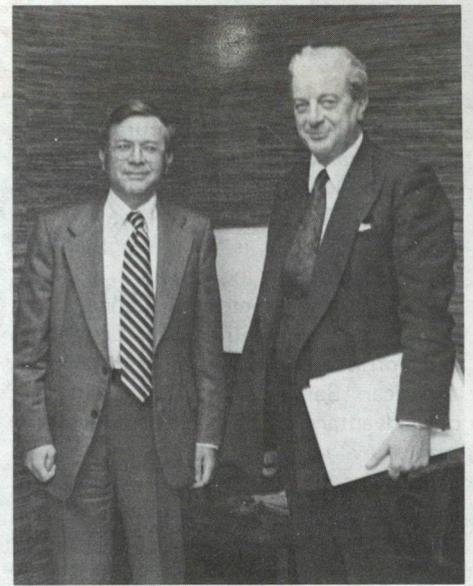
The technical cooperation will be used to secure the services of consultants who will identify the complementary studies required to bring to the feasibility level the studies performed on specific programs and projects and will draw up a basic outline for a development plan for the region, as well as determining the steps involving institutional strengthening of the Ecuadoran Subcommittee and the professional, technical and administrative training of personnel. The area where PREDESUR will be carried out, comprising some 8.6 million acres in the provinces of El Oro, Loja and Zamora-Chinchipec, is one of the least developed in Ecuador with an income level below the national average. While farming and livestock constitute the major economic activity of the region, farm production is centered on only a few crops, yields are low and much of the land is lying idle. This technical cooperation will help analyze the possibilities of investment in agriculture and livestock development programs, including irrigation works and colonization, as well as the exploitation of forests and mines.

**HAITI:** The Bank announced October 7 the approval of \$200,000 in grant technical cooperation to strengthen the administrative capacity of the *Centrale Autonome Métropolitaine d'Eau Potable (CAMEP)* in Haiti and to establish an institutional development coordinating unit within CAMEP. The technical cooperation will be used by CAMEP, the water supply agency for Port-au-Prince, to hire consultants to provide institutional support in the administrative, technical, commercial and personnel training fields. The total cost of the project is estimated at \$225,000.

This technical cooperation will supplement the program under which CAMEP is expanding distribution lines, constructing reservoirs and installing pump stations, hydrants, household connections and meters in Port-au-Prince, Petionville and adjacent areas with the help of three Inter-American Bank loans totaling \$9,760,000.

**PARAGUAY:** The Bank announced October 7 the approval of \$129,000 in technical cooperation to prepare final designs for the water supply systems of the cities of Villarrica and Coronel Oviedo in Paraguay. The technical cooperation was extended on a contingent-recovery basis to the *Corporación de Obras Sanitarias (CORPOSANA)*, Paraguay's water and sewage agency, to contract a consulting firm to prepare the design and detailed construction drawings of the water impoundment and conveying works, treatment works, water storage works and the distribution system; to prepare detailed project costs, construction specifications and technical and contractual documents, and to train counterpart staff in the two Paraguayan cities. The total cost of the project is estimated at \$158,000.

Completion of the project is expected to reduce the incidence of morbidity and mortality caused by water borne diseases and to contribute to the development of business and industrial establishments in Villarrica and Coronel Oviedo, the third and fourth largest cities in Paraguay, which have a combined population of 35,000 inhabitants.



C. R. Angus Rae, right, Subsecretary of the Ministry of Overseas Development of the United Kingdom and Alternate Governor of the Inter-American Bank, recently visited Bank headquarters where he talked with Reuben Sternfeld, Executive Vice President of the Bank (with whom he appears in the photograph), and with the Managers of Operations, Economic and Social Development, and Plans and Programs, and the Deputy Manager of Integration. The United Kingdom is one of the countries from outside the Western Hemisphere which joined the Bank in July.

**REGIONAL:** The Bank announced October 28 the approval of \$97,000 in grant technical cooperation for a training program in socio-economic analysis to be given by the Bank to personnel of national and regional development finance institutions administering global industrial credit loans granted by the Bank.

The training, which will take the form of short-term technical cooperation, will benefit national and regional finance institutions serving as financial intermediaries for global industrial credit loans provided by the Bank. The training will take place in countries requesting it and the priorities will be decided by the Bank's Operations Department in consultation with the Project Analysis Department.

## BIDDING INFORMATION

Recently a Costa Rican government agency requested bids for goods and services which are to be acquired with financial resources furnished by the Inter-American Bank. Details, as published in local newspapers, are given below:

The *Instituto Costarricense de Electricidad (ICE)* has announced the opening of Public International Bid No. 3210 for the manufacture, installation and testing of appurtenances for the Arenal Hydroelectric project. The contract's specific items are: a penstock, 4.6 meters in diameter, 420 meters in length and approximately 1,350 tons; a surge tank, 12.5 meters in diameter and approximately 465 tons; a butterfly valve 4.6 meters in diameter; a spherical valve, 1.6 meters in diameter.

Documents describing the bidding terms may be obtained from the *Instituto Costarricense de Electricidad*, P. O. Box 10032, San José, Costa Rica. There is a nonrefundable fee of \$60 for a complete set of bidding forms.

The Inter-American Bank will finance the importation of goods and services from eligible member countries and relatively less developed countries that are members of the International Monetary Fund.

Bids must be submitted by January 11, 1977.

# Development of Craft Industries Holds Promise for Latin America

To slow down the drift of rural dwellers to urban areas, Latin American nations must build stronger economic foundations in their hinterland. One way to help achieve this aim is to strengthen the region's handicraft industries.

This is the opinion of Leonardo da Silva, Chief of the Industrial Economics and Infrastructure Section of the Inter-American Bank. Mr. da Silva says that one advantage of handicraft industries is that they require little or no capital investment because their key inputs are labor and local raw materials and although Latin America is handicapped by a shortage of capital, the region has an abundance of labor. Also, craft industries help increase income for people at the bottom of the economic scale, especially rural women and other agricultural workers who are idle part of the year and who have no other employment opportunities.

In short, handicraft industries can benefit Latin American countries by maintaining a balance in urban-rural development programs; providing for the entry of women into the economy and capitalizing on their existing skills; using available low-cost native materials; increasing output of processed goods and augmenting exports.

Mr. da Silva noted that it is the Bank's objective to provide assistance for the development of craft industries and added that the President of the Bank, in his inaugural address to the Board of Governors on assuming his office in 1971, urged a study of "the development of special industries in impoverished—mainly rural—zones. Among these, the exploitation of crafts organized for mass production can substantially expand our countries' exports and provide jobs for a great many Latin Americans who would remain in their own communities."

Since its inception, the Bank has made financing available to Latin America's craft activities through loans granted to industry, agriculture, tourism, education and community development. Such loans have helped the craft sector in Bolivia, Costa Rica, Chile, Ecuador, El Salvador, Haiti and Peru. Nonetheless, IDB experts observed that in many cases the average craftsman can not take full advantage of these loans because of rigid terms and conditions, the artisan's low level of business education, and the lack of complementary technical assistance at the

producer level.

In view of this, the IDB took steps to provide technical cooperation to promote the development of Latin America's craft industries. In early 1973, it undertook a preliminary analysis of the craft sector in several countries of the area and in late 1973 formulated an Artisan Enterprise Development Program geared to improve the handicraft sector's production, marketing, financial capabilities and, especially, management.

The long-run objectives of the program are to expand handicraft production; incorporate unemployed workers into the workforce; improve artisan productivity levels; open new external markets and generate foreign exchange earnings; and obtain a more equitable distribution of income through the expansion of remunerative employment, especially in impoverished rural areas. Another feature of the program is to increase the direct participation of the artisan at the various



The famed "fianduty," Paraguayan artifact with growing commercial appeal.

levels of management, production and marketing and to reduce their traditional dependence on commercial intermediaries, thereby maximizing their income.

Mr. da Silva pointed out that development leaders in Latin American countries should not overlook the craft industries in their planning. He gave two reasons: "The first is a socio-political one. It stems from the concern for the fate of families that depend for their livelihood on the earnings of traditional household industries like handloom, weaving, pottery and the casting of brass utensils. In many countries, these considerations have great importance.

"The second is a developmental reason; that is, those charged with development planning have to try to visualize what constructive role artisans and home industry can play in the emergence and growth of a modern industrialized econ-

omy and what means can be used to bring about the necessary transformation in technique and organization. Industrial development within a community is partly reflective of past and current artisan activities as they affect manpower habits and the standards of labor productivity and skills. Indeed, many countries presently characterized by the presence of highly skilled industrial labor have also been for centuries significant producers and exporters of craft items in competitive markets. Countries such as Sweden, Switzerland and Denmark, just to mention a few, are examples of nations which have utilized their artisan skills for the development of highly sophisticated machine and instrument industries."

Still, there are several obstacles to converting artisan industries into a development asset and fitting them into a plan of economic and social progress. For example, productivity in traditional non-factory industries is low, reflecting backward production techniques and poor business organization. A recent Latin American survey pointed out the great disparity from country to country in the productivity of the manufacturing sector. Much of the discrepancy was accounted for by the low average productivity of handicrafts and homecrafts which was usually less than half of the productivity achieved in factory industry.

In addition to low productivity, handicraft activities in Latin America have been characterized by an inability to take advantage of existing and potential markets due to inadequate production in terms of volume and quality, as well as deficiencies in organization and marketing. Also, because resistance to change has been strong in traditional non-factory industries, the costs and organizational problems of reaching thousands of rural workers to induce change are high.

According to Mr. da Silva, the development of Latin American handicrafts calls for technical know-how and modern organizational, administrative and marketing methods. Indeed, the handicraft sector's developmental efforts must be directed towards strengthening its organization, expanding its access to credit and improving its efficiency. Only in this way will the sector be in a position to attract and utilize productively a greater volume of financial and technical resources, so as to improve the level of economic and social well-being of a very important segment of the region's population. There is no reason why this sector should lag behind the general progress of the countries of Latin America.