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REPORT OF THE LATIN AMERICAN COUNTRIES ON THE PRESENT STATE OF THE PREPARATORY ACTIVITIES FOR THE UNITED NATIONS CONFERENCE ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT*

* Excerpt from the Report of the Latin American Meeting of Governmental Experts on Science and Technology for Development held from 31 October to 2 November 1977, to be presented at the Second Meeting of the Preparatory Committee for the United Nations Conference on Science and Technology for Development, to be held in Geneva, Switzerland, from 23 January to 3 February 1978.

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REPORTS ON NATIONAL ACTIVITIES

During the meeting, the delegations presented a brief report on the progress of the preparatory work that was being carried out in their countries for the World Conference on Science and Technology. They referred to the national focal points responsible for that work, to the tasks that had already been completed, to the stage of progress of their scientific and technological development and to their needs for technical assistance.*

Argentina

The delegate from Argentina informed that the Ministry of Foreign Affairs, the Ministry of Culture and Education (Secretariat of Science and Technology), the Ministry of Planning (Secretariat of Technical Cooperation) and the National Scientific and Technical Research Council of his country were presently collaborating in support of the Conference.

To date only consultations had taken place to define national interests and to coordinate them with those of the rest of the Latin American countries. To this end, the experience gained by technological and scientific research organizations such as universities, the CONICET, academies and institutions was very valuable.

He indicated that national priorities could only be given concrete form upon formulation of the national paper, and that certain areas of interest that had encountered obstacles impeding their full development had already been defined. These areas were: health and welfare; non renewable natural resources and in particular the use of geothermal, petrochemical (fertilizers, oil and coal) and mining resources; and the utilization of renewable, agricultural, forest and marine resources. He also mentioned making use of arid and semi-arid zones, reforestation and forestation, agricultural fertilization and mechanization, the fishing industry and utilization of the extensive continental shelf;

*The statements of the delegations are presented in the order in which they appear in the Spanish version of this Report.

/the transformation

the transformation of natural resources in order to guarantee industrial development that did not depend on imported raw materials and that would offer possibilities for employment, market diversification, relative reduction of the cost of living; and lastly, the exchange of raw materials and manufactured products, in addition to technical and scientific knowledge (transfer of technology) on both the foreign and domestic levels that might serve as a basis for a national scientific and technological policy.

The delegate stated that it would be advisable to hold subregional seminars such as that programmed for the Southern Cone, which would be useful in improving national papers in preparation.

He concluded by stating that his country would be in a position to provide technical assistance in some areas in which it had distinguished itself, and that such assistance could be channeled through the General Secretariat of the Conference.

Barbados

The delegate from Barbados reported that until 1976, science and technology in his country had been the responsibility of the Ministry of Agriculture. Since that date, the principal responsible organization was the Ministry of Finance and Planning, which was under the jurisdiction of the Prime Minister. The National Council for Science and Technology, which is under the Ministry of Finance and Planning, had been designated as the focal point in Barbados and had been charged with the preparation of the National Paper on Science and Technology for Development.

Although priorities had not yet been announced, certain areas of interest such as agriculture (including animal husbandry and health, irrigation, agro-industries), health, low income housing, and alternative energy resources had already been identified. Housing comparatively speaking was adequate, but must be improved, particularly through the use of local material like clay and sugar cane derived building materials. The study of alternative sources of energy such as solar energy, wind energy and that derived from the use of bio-gas were also of interest.

/Bolivia

Bolivia

The representative from Bolivia stated that, although his country had not yet begun the preparatory work for the World Conference, certain areas of interest, such as agriculture, mining and metallurgy would surely be taken into account when national priorities were formulated.

Bolivia would require technical assistance both for the instrumentation of policies and for the disaggregation of technological packages and the application of standards.

A National Commission had been established to evaluate all documentation on such matters. At the present time the establishment of an organization was being studied to coordinate all aspects related to science and technology, which in turn would coordinate with the authorities responsible for national planning at high decision-making levels.

Brazil

The delegation from Brazil mentioned that the government of his country was assigning special importance to the objectives of the World Conference of his country. The focal point was the Ministry of Foreign Affairs.

At present, a national development team on science and technology was working jointly with the above mentioned organization. That group had set itself the goal of concluding a report by the end of the present year that it was hoped would provide reliable information on the levels of application of science and technology. The document would be of a descriptive and analytical nature and would include recommendations and suggestions to diminish the obstacles that had impeded the development of science and technology.

Although it was not easy to determine areas of action before concluding the national paper, generally speaking, some of them could be the following: the industrial sector (energy, electricity and transportation), agriculture (including forest resources) and scientific development, which would include technology, education, human resources and information.

/Earnest

Earnest efforts were being made to define the terms science, technology and development and their interrelationships. Criteria were also being concreted to select techniques, promote the production of capital goods, regulate foreign investment and overcome the obstacles impeding autonomous technical progress.

Brazil was in a position to assist other countries requesting technical assistance.

Colombia

The delegate from Colombia reported that the national focal point of his country was the Ministry of Foreign Affairs. The Colombian Fund for Scientific Research and Special Projects (COLCIENCIAS), a governmental scientific and technological organization, which at the same time constituted the Executive Secretariat of the National Council on Science and Technology, was responsible for formulating the preparatory work for Colombia's participation in the World Conference on Science and Technology.

He considers that the preparation of the national paper should be supported by concrete experiences derived from studies and actions already carried out, as well as from the policies that had been formulated in the country to promote scientific and technological development. Among those were the monographs that had been presented in various forums, such as the OAS, the United Nations, the Andean Pact and the Andrés Bello Agreement; special studies carried out by COLCIENCIAS, by universities and by the National Planning Department on obstacles, inventories and scientific and technological policy; the participation with other countries identifying scientific and technological policy mechanisms and instruments, and even the experimentation in the field of the transfer of technology; the application of policies for the transfer of technology through institutions such as the Royalties Committee, which had been in operation since 1967; the experiences

/obtained

obtained in applying the technological policy of the Andean Group; and the study of the situation of science and technology in Colombia, carried out in 1975 with the collaboration of a group of high-level national and international experts.

He pointed out that a great number of scientists and planners in the economic, social, scientific and technological fields had participated in the above mentioned work. It was hoped that those elements would contribute to the preparation of the national paper. Several seminars were being planned to fulfill that commitment and thereby concentrate the positions of all sectors on the national level.

Costa Rica

The representative of Costa Rica noted that the National Scientific and Technological Research Council (CONICYT), an autonomous institution established by law in 1972, was the focal point in his country responsible for the formulation of the national paper.

A working group integrated by CONICYT, the Ministry of Foreign Affairs and the National Planning and Economic Policy Office was presently concerned in the definition of the methodology to be used and concepts were being exchanged with a United Nations expert on the approach to be taken for the national paper. Insofar as the selection of subject areas was concerned, CONICYT would have the collaboration of ad hoc groups, which had already formulated reports on the situation of research of the following: agriculture; energy; natural resources, in particular marine resources and tropical forests; health, particularly the field of nutrition; housing; information and documentation in specific areas such as industry, agriculture, health and so forth.

Lastly, with regard to technical assistance, he indicated that Costa Rica required an expert to revise its national paper.

Cuba

The delegate from the Republic of Cuba expressed that the Government of his country had particular interest and granted special importance to the United Nations Conference on Science and Technology for Development and its preparatory process.

/A national

A national group had been recently established, headed by the State Committee for Economic Collaboration, integrated by the State Committee on Science and Technology, the Academy of Science and the Ministry of Foreign Affairs with the objective of formulating the national paper, as had been requested by the Conference Preparatory Committee.

Chile

The representative from the Republic of Chile indicated that the focal point in his country was the National Commission for Scientific Research and Technology (CONICYT).

The national paper was being prepared and progress had been made on the following topics:

a) Fundamental principles of Chilean scientific and technological policy;

b) Analysis of the scientific and technological system;

c) Financial resources allocated to the scientific and technological system;

d) Global aspects with regard to the selection and transfer of technology;

e) Integration of scientific and technological components within the dynamic elements of economic and social development;

f) Exchange mechanisms of scientific and technological information;

g) Cooperation in science and technology among developing countries,

An exhaustive analysis of one of the areas selected during the present Meeting was also being planned, for which technical assistance would be requested from the Secretariat of the Conference.

Ecuador

The Government of Ecuador, reported his representative, was assigning great importance to the World Conference, as demonstrated by the various meetings that had been held internally.

Although the preparatory activities for the World Conference had not yet been initiated, the Planning Council was defining its viewpoints on the subject and had begun to establish contacts with

/various

various organizations in order to formulate the national paper. Interest existed in ways and means of reducing technological dependence from the developed countries and in establishing a code of conduct.

Among the areas that could be selected were agriculture, industry, food technology, low-income housing and health.

Ecuador required a United Nations expert to collaborate in the coordination of the work that was being carried out and was willing to establish bilateral contacts with other countries in order to obtain the cooperation it needed.

Guatemala

The delegate from Guatemala declared that in his country it is considered that the World Conference should serve general objectives, such as emphasizing the concern of developing countries with regard to the international sphere where science and technology were generated and acquired, and creating greater national awareness of scientific and technological problems. That would require the combined efforts of institutions in order to ensure the possibility of formulating and applying policies that would strengthen the capacity for generating and applying science and technology at the lowest possible cost.

The Science and Technology Unit of the National Economic Planning Council was the focal point for Conference activities and was responsible for planning, coordinating and applying the national policy related to science and technology included in the 1975-1979 National Development Plan. Within its coordinating functions, the Unit had established a formal relationship with the Ministries of Economy and Foreign Affairs and with the National Bank and the Science and Agricultural Technology Institute, among others. It hoped soon to benefit from the collaboration of subregional organizations such as SIECA, INCAP and ICAITI.

Based on a series of general and individual criteria and in consideration of the institutions that were participating in formulating the national paper, four subject areas were identified: agriculture, natural resources, agro-industries and construction.

/Lastly,

Lastly, Guatemala hoped that with the assistance from regional and international consultants it would be able to participate in formulating the report on the Central American area as agreed at the recent subregional seminar held in Guatemala (October 1977).

Guyana

The representative from Guyana stated that country was assigning high priority to the preparatory activities for the World Conference. Its focal point was the National Scientifics Research Council, an institution that governed scientific and technological policy and functioned directly within the Ministry of Economic Development. All areas of scientific activity, including administration and industry, were represented in the Council.

With support from the United Nations Development Programme (UNDP) the Council had formulated a document on scientific policy that had already been approved, and it had requested assistance from that organization for application of the policy. The establishment of an Institute for the Application of Science and Technology was also being promoted with UNDP support.

The criteria and mechanisms for selecting each subject area had been established, and specialized committees sponsored by the National Council had been set up in different spheres of activity selected for in-depth study. Assistance would be provided for that purposeo by a consultant from Canada.

Among the areas selected were agriculture, fishing, forestry and its by-products, mineral resources, energy (cheap energy sources), environment and health, industry (particularly small industry), education, manpower training, scientific and technological information, and lastly, international relations in the scientific field.

The delegate from Guyana concluded by reporting that a subregional conference entitled "Consultations on Science and Technology Policies in the Caribbean Region", sponsored by UNESCO, would be held in December, 1977. The conference would serve, inter alia, as a forum for the preparation of the World Conference.

/Haiti

Haiti

The delegate from Haiti indicated that his country acknowledged the importance of science and technology in the economic progress of nations inasmuch as they constituted a tool that contributes in accelerating economic and social development.

Development planning was being carried out through the National Development and Planning Council (CONADEP), established in 1963. The integration of scientific and technological planning with general economic and social development planning can be achieved through the Office of Science and Technology.

In 1975/1976 the Office of Science and Technology made an inventory of the country's scientific and technological potential that included studies performed by university research centres and public institutions that analyze among other building materials, mineral resources, public health, nutrition, agro-industrial development, statistics and professional training.

No private centres devoted to research were in existence, with the possible exception of a few involved in studying human sciences; private companies were not structured so as to make internal development of science and technology possible.

The National Development and Planning Council was presently analyzing the economic and social aspects of science and technology that should be included in the 1976-1981 development plan.

Although no formal and explicit policy existed for science and technology, specific programmes and projects are being implemented. The most outstanding are: experimentation with rice and corn fertilization in different types of soils; the selection of varieties of grains with the purpose of gradually eliminating undesirable ones; the utilization of sugar cane by-products; research aimed at obtaining greater yield from sugar cane and banana production; and research aimed at replacing charcoal with a similar fuel of local origin.

Subject areas selected for the application of science and technology were: production preservation of foodstuffs; development of the pharmaceutical industry and eradication of diseases; inventory and evaluation of marine resources; and development of new sources of energy.

The government of Haiti had already begun to establish the contacts required with the different sectors that would be collaborating in preparing the national paper, an undertaking that would require technical assistance from different United Nations organizations.

Honduras

The delegate from Honduras declared that the government of his country had been granting singular importance to the World Conference on Science and Technology for Development.

He also indicated that Hondura's focal point for that Conference was the Technical Secretariat of the Superior Economic Planning Council. Certain activities were underway in formulating the national paper through its Science and Technology Department. A National Commission was being formed with the participation of governmental agencies and representatives from the scientific community and the productive sectors so that the national paper would include the concerns of the main participants in scientific and technological activity.

Taking into account the vast socioeconomic problems, the availability of natural resources, the economic and social policies already formulated and the economic and social structure of the country itself, the following subject areas had been identified: agricultural sector, agro-industry, natural resources (forest, mining and marine) and health (nutrition and pharmaceutical products).

The elaboration of the national paper would require the assistance of an expert in topics such as the formulation of scientific and technological policies, and the analysis of the impact of the transfer of technology on the national economy as well as of the influence of the scientific and technological development on the Honduran economic style of development. This expert should also assist in contracting local technicians who would study the technological demand in the public and private sectors.

/Jamaica

Jamaica

The representative from Jamaica stated that the Government of his country had granted its support to the preparatory meetings for the World Conference on Science and Technology for Development since it considered them of great importance in assuring the success of the Conference and on achieving the New International Economic Order.

The focal point for the preparation of the national paper was the Council for Scientific Research (CIC), an organization that included representatives from the public and private sectors, industry, industrial and educational organizations, as well as from workers' and other groups. CIC coordinated, promoted and directed all scientific and technological activities required for exploiting the country's natural resources.

With regard to the preparation of the national paper, the Council had established contacts with important scientific and technological organizations, with the public and with private and educational sectors in order to ensure that the paper would include all the interests of the country.

Stress had been laid on technologies related to agro-industry, mineral resources, the development of small-scale industries, non-conventional sources of energy, nutrition, low-cost construction materials, the manufacture of consumer goods, the utilization of waste products and the development of water resources. An attempt was also being made to eliminate restrictive practices that impeded the transfer of technology on equitable bases and to promote activities leading to the development of local technologies adapted to social needs.

In order to achieve those objectives, assistance had been requested in the field of scientific and technological planning, and cooperation had been requested of the Secretariat of the Conference in preparing the national paper.

Mexico

The Mexican delegation reported that the focal point in its country was the National Council for Science and Technology, the organization responsible for coordinating activities in the field. In late 1976 the Council had prepared the National Science and Technology Indicator Plan, in which scientists, users of science and technology, and public sector officials participated.

This Plan formulated guidelines and action policies for key aspects of scientific and technological development and provided a frame of reference for the implementation of programmes.

The National Scientific and Technological Research Programme that was presently being concluded in CONACYT and which had formed part of the following phase of the aforementioned Plan, was the result of a collective effort involving participation by approximately 400 representatives from the scientific and technological community and from the productive public and private sectors.

As a result of the work that had been carried out, first in the National Science and Technology Plan and later in the National Research Programme, Mexico proposed the following subject areas:

- Development of planning and organization of the scientific and technological system;
- Improvement in liaisons with the productive sector;
- Proper training of human resources;
- Broadening of the capacity for constructing and maintaining equipment and tools for research;
- Increase and improvement of information services;
- Effective application of international cooperation policies and of regulations in the field of transfer of technology.

Each subject area would refer to different sectors, such as food, health, energy, capital goods and so forth.

/Nicaragua

Nicaragua

The representative from Nicaragua stated that the National Planning Office was in charge of directing the preparatory activities for the World Conference. In collaboration with the Central Bank's Technological Research Department, that Office organized meetings with different national sectors, including the private and university sectors, and forced working groups that would contribute with suggestions and proposals in the field.

She also noted that progress was being made in detailing and expanding the preliminary diagnosis on science and technology; in the formation of committees and advisory groups for determining the areas that Nicaragua would cover in its national paper; and in the preparations for the Fourth Meeting of the Commission for the Scientific and Technological Development in Central America and Panama that would be held in Managua in December 1977, as approved at the Central American Seminar held recently in Guatemala. A national report was being prepared for that meeting.

Although not yet clearly defined, the following subject areas could be mentioned: energy, including geothermal energy and that derived from agricultural waste products; agro-industries, public health; nutrition, and education.

Nicaragua would request technical cooperation in accordance with the progress made in the preparation of its national paper.

Panama

The Government of Panama, stated its representative, had special interest in the World Conference on Science and Technology and fully supported the preparatory work for the Conference in order to ensure the achievement of the objectives proposed.

The foregoing considerations had been dealt with in a Preparatory Document elaborated by the interinstitutional group in charge of the formulation of the national paper. That group was coordinated by the

/Ministry

Ministry of Planning and Economic Policy, the focal point with which the Centre for the Development of National Research Capacity (CEDECANI) collaborated.

The utilization of science and technology in interoceanic communications and transportation was prominent among the subject areas selected by Panama.

The delegation of Panama considered that the preparatory work for the Conference (national efforts, subregional meeting and regional meeting) had enriched its experience with respect to the approaches, criteria and guidelines that could conduct to a common position for the Latin American region and the countries of the Third World.

It believed that the preparatory work should be oriented toward a common position of Latin America with regard to the World Conference in order not to weaken the region's position with subregional papers. Subregional seminars could be oriented in that sense and become working groups to develop a methodology that could be applied in preparing national papers.

Dominican Republic

The Dominican Republic's focal point was the Science and Technology Unit (established in January 1975), subordinated to the Technical Secretariat of the Presidency. That Unit was working on a diagnosis on the subject of science and technology and on studies on the transfer of technology, with special emphasis on the search for mechanisms to regulate such transfers.

The delegate from that country noted that the following areas could be promoted in the technological aspect: agricultural development, which would be a solution to problems of unemployment and nutrition and the development of different crops, which would mean a significant increase in exports; utilization of sugar cane waste in processing by-products, such as paper; and the application of technology to the mining sector, which would require international technical assistance with respect to soil utilization and in preparing a national geological map.

/Trinidad

Trinidad and Tobago

The representative from Trinidad and Tobago reported that the focal point in his country was the Working Group in Science and Technology subordinated to the Ministry of Foreign Affairs. That Group had been carrying out various activities for the World Conference.

Several institutions had been assigned specific tasks in order to identify the work that would be required at the national level. Those institutions were: The Caribbean Industrial Research Institute (CARIRI), in charge of preparing the national paper; the National Technology for Development Council (NCTD), which would revise the document before submitting it for approval at the governmental level, and lastly, the Working Group on Science and Technology, which was responsible for the final evaluation.

Specific activities had been undertaken to ensure that all sectors of the country would be sufficiently prepared to take part in the elaboration of the national paper.

The Government had formulated a preliminary document that would serve as an indicator of reactions of the country's political parties. For that same purpose, a seminar was being organized for November 1977 to gather opinions from different national sectors.

Subject areas would be determined gradually in accordance with the progress of the national paper. In any case, however, priorities should be oriented toward obtaining the maximum benefits derived from the utilization of natural and human resources.

The delegate stated that regarding natural resources the country had relatively abundant reserves of oil. The fundamental strategy, therefore, should consist of promoting its exploitation, however in such a way as to prolong its availability and diversify the industrial base in order to ensure a more stable economic basis for future generations. In that connexion, agreements had been settled for the development of iron and steel, fertilizers, cement and petrochemicals.

/ In order

In order to increase its industrial development, the Government of Trinidad would have to provide for sectors such as the construction industry and infrastructure (roads, water, electricity and communications). Development of its capacity to produce capital goods and promotion of agricultural production would also have to be given priority.

With regard to human resources, emphasis was concentrated in four basic areas aimed at improving the quality of life of the country's inhabitants: health, education, housing and infrastructure.

In a broader context, the areas of interest to Trinidad and Tobago were: oil, as a basis for industrialization; small and medium-scale technology; ocean resources; education and training; and building techniques and materials.

Finally, with regard to technical assistance, Trinidad and Tobago requested the United Nations and UNESCO to provide the services of an expert.

Uruguay

The delegate from Uruguay declared that the Government of his country is conscious of the importance that the celebration of the World Conference on Science and Technology for Development represents for the developing countries. With regard to the designation of the focal point, he informed that the liaison between Uruguay and the Conference Secretariat would be the Ministry of Planning, Coordination and Diffusion, and that the National Scientific and Technological Research Council would be in charge of the elaboration of the national paper.

CONICYT had been studying for some time specific areas, and analizing the potential of human resources and problems related to the transfer of technology, particularly with regard to information and commercialization. In the months to come greater efforts would have to be devoted to the preparation of the national paper.

Even though subject areas had not yet been defined, energy and agroindustry would surely receive special attention.

Technical assistance requirements would be identified soon and requests for such assistance would be made in due course.

Venezuela

The representative from Venezuela noted that the National Scientific and Technological Research Council (CONICYT) designated as focal point, acted as liaison with the Conference Secretariat. A science and technology strategy was contained in a plan that would orient the country's economic and social development for the 1976-1980 period.

Even though the subject areas for the national paper had not yet been defined, it was considered that, due to their pertinence in illustrating the scientific-technological problems, capital goods, pharmaceutical industry and transportation could be contemplated.

He concluded by offering the technical assistance of his Government to any country that might request it.