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Economic Commission for Latin America



REPORT OF THE NINTH SESSION OF THE COMMITTEE OF HIGH-LEVEL GOVERNMENT
EXPERTS: SCIENCE AND TECHNOLOGY FOR DEVELOPMENT */

(Montevideo, Uruguay, 23 and 24 January 1984)

*/ Comments on this report should be submitted to the ECLA Secretariat before
10 March 1984.

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Part One

I. ORGANIZATION OF WORK

1. Place and date

1. The ninth session of the Committee of High-Level Government Experts (CEGAN), devoted to the subject of Science and Technology for Development, was held in Montevideo, Uruguay, on 23 and 24 January 1984. The session was held in compliance with the mandates set forth in resolution 357 (XVI), which instructed CEGAN to take up the matter of science and technology, and resolution 449 (PLEN.16), on the Programme of Work and Calendar of Conferences of ECLA. Account was also taken of the provision contained in paragraph 106 (a) of the Vienna Programme of Action on Science and Technology for Development and in paragraph 61 of the Operational Plan for the implementation of the Vienna Programme of Action. The session was held immediately following the eighth session of CEGAN (Montevideo, 18 to 23 January 1984), devoted to the Appraisal of the Implementation of the International Development Strategy for Latin America and the Caribbean, taking into account the current economic crisis.

2. Attendance

2. Government experts from 19 States members of the Commission participated in the session: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela.

3. Participating on behalf of the United Nations Secretariat were representatives of the United Nations Centre for Science and Technology for Development (UNCSTD) and the United Nations Industrial Development Organization (UNIDO).

4. The following specialized agencies of the United Nations were represented: Food and Agriculture Organization of the United Nations (FAO), United Nations Educational, Scientific and Cultural Organization (UNESCO) and the World Health Organization/Pan American Health Organization (WHO/PAHO).

5. The following intergovernmental agencies were also represented: Latin American Integration Association (ALADI), Intergovernmental Committee for Migration (ICM), Permanent Secretariat of the General Treaty on Central American Economic Integration (SIECA) and the Latin American Economic System (SELA).

6. Attending the meeting by special invitation were Mr. Héctor López Alvarenga, Chairman of the Commission for Scientific and Technological Development of Central America and Panama (CTCAP) and Mr. Enrique Martín del Campo, Executive Secretary for Science, Education and Culture of the Organization of American States (OAS).

/3. Election

3. Election of Officers

7. The following officers were elected:

Chairman:	Uruguay
First Vice-Chairman:	Peru
Second Vice-Chairman:	Mexico
Third Vice-Chairman:	Cuba
Rapporteur:	Ecuador

4. Agenda

8. At its first plenary meeting, the Committee approved the following agenda:

1. Election of officers
2. Adoption of the provisional agenda
3. Review of the implementation of the Vienna Programme of Action on Science and Technology for Development
 - a) Presentation by the Secretariat
 - b) Appraisal of progress achieved
 - c) Proposals for future action
4. Consideration and adoption of the report

5. Opening meeting

9. At the opening meeting, held on Monday 23 January, statements were made by Mr. Héctor López Estremadouro, Under-Secretary for Education and Culture of Uruguay; Mr. Enrique V. Iglesias, Executive Secretary of ECLA, and Mr. Amílcar F. Ferrari, Director of the United Nations Centre for Science and Technology for Development.

10. Mr. Héctor López Estremadouro, who was elected Chairman of the session, welcomed the participants and stressed the importance of the session for the analysis of the prospects of science and technology as a vehicle for the socio-economic development of the countries of the region. He said it was important to co-ordinate efforts to increase the indigenous capacity to generate technologies and try to reduce external dependency in this field. Latin America was faced with the dilemma of either allowing a weakening of this fundamental foundation of development or trying to update its scientific thinking and technological skills. Finally, he thanked ECLA for its work in preparing the background document for the work of the Committee.

11. Mr. Enrique V. Iglesias, Executive Secretary of ECLA, expressed his appreciation for the support and hospitality offered by the Government of the host country. He said that the question of science and technology and its relationship with development problems had been recognized by ECLA since its inception. After referring to some of the major guideposts that marked the growing awareness of the possibilities offered by science and technology, he said that several national agencies were now dealing with the question and that the private sector had also made a valuable contribution in this regard. When the Vienna Programme of Action had been adopted, many of the region's proposals had been included in it. He then reviewed the objectives of the Programme and, with regard to the strengthening of

/the scientific

the scientific and technological capabilities of the developing countries, recalled the words of Jorge Sábato, who had dramatically stated that either the developing countries would control technology or others would use it as their fundamental tool for controlling the peoples of the developing world. It was extremely important to advance towards restructuring the foundations of international co-operation in the area of science and technology; a third industrial revolution was in the offing which had tremendous implications for the region and would change its conception of international relations and its view of internal relations. Finally, he referred to the seriousness of the current crisis and to the fact that, if projections proved true, by the end of the 1990s the region's per capita income would only be at the levels achieved in 1980. That meant that the question of science and technology would again come to the fore in the debate, as solutions were sought to the problems of development.

12. Mr. Amilcar F. Ferrari, Director of the United Nations Centre for Science and Technology for Development said that the current session was an exercise in reflection, criticism and self-criticism to enable the agents to whom the recommendations of the Vienna Programme of Action were directed to review the extent to which those recommendations had been fulfilled and how well they had served to produce the desired results. He then referred to specific aspects of the implementation of the VPA which concerned Latin America. He stressed the contribution that Latin America had made to the conceptualization and political awareness, at the world level, of the economic and social development process and its relationship with scientific and technological training. The region had been in the vanguard not only in the study of models and theories relating to the subject but also in the formulation and application of practical prescriptions for the political and administrative management of science and technology as a strategic element of the economic and social development process. ECLA's important contribution in this field would be continued and expanded as a result of the inclusion of the question of science and technology among the matters to be examined by CEGAN.

13. Latin America seemed to be one of the developing regions that had been most affected by the current world crisis. Although not all the region's problems could be attributed to its weakness with regard to technological training, such training did add dynamism and efficiency to the structure of production and could only be achieved through the articulated use of various economic and social policy instruments. Finally, he said that the linkage and integration of the economic and social spheres with the scientific and technological spheres was an issue of the utmost importance on which much remained to be done.

14. At the last working meeting, the Rapporteur submitted the report of the session. He said that as a result of its deliberations, the Committee had approved a document containing an appraisal of the Vienna Programme of Action on Science and Technology for Development. The document, included as Part Two of the report, consisted of two parts: the first contained an appraisal of the implementation of the Vienna Programme of Action in Latin America and the second proposed a set of measures and actions to be taken in future to improve substantially the implementation of the VPA in the region.

6. Closing meeting

15. At the closing meeting, held on 24 January, Mr. Carlos Rafael Abeledo, Under-Secretary for Promotion of the Secretariat of Science and Technology of Argentina, speaking on behalf of the participating delegations, expressed his appreciation for the hospitality received and referred briefly to the results of the session. He said that it had provided an opportunity to discuss frankly the progress made in the implementation of the Vienna Programme of Action, to identify the problems that were holding back progress in that regard, to recognize shortcomings and to propose specific measures. Special emphasis had been placed on the improvement of mechanisms for co-operation between institutions concerned with science and technology in the countries of the region. He noted a general concern among the participants to the effect that the international, regional and subregional agencies should intensify their efforts to place their activities within the framework of the Vienna Programme of Action.

16. The Executive Secretary of ECLA endorsed the remarks made by the representative of Argentina and said that the Committee had produced a serious and compact document on the vision of the region with regard to advances in the implementation of the Vienna Programme of Action. Horizontal co-operation had been particularly emphasized, giving the document a definite practical approach. He reiterated ECLA's willingness to increase its activities in the area of science and technology, as well as its collaboration with the governments and agencies working in those areas.

17. Mr. Amilcar F. Ferrari, Director of the United Nations Centre for Science and Technology for Development, expressed his satisfaction at the fact that the first step in the regional review of the Vienna Programme of Action had been taken in Latin America, which played a leading role in the area of science and technology. Although the conclusions reached at the session showed that the progress made in the implementation of the Programme had been modest, the Programme itself remained valid as a proposed strategy. New problems and trends had been identified and there was a desire for co-operation at the regional level; moreover, there was an awareness of the need to co-ordinate the activities of the various agencies in order to allow for a more national use of their resources, complementarity in their activities and mutual support. It was to be hoped that at the forthcoming session of ECLA, to be held in Lima, the countries would adopt measures designed to put CEGAN's recommendation into effect and thus strengthen intra-regional co-operation for development. Such co-operation was essential not only because of the current crisis but also because the countries of the region should be responsible for their own future. That meant they could not do without the scientific and technological capacity that the Vienna Programme of Action was designed to strengthen. In conclusion, he congratulated ECLA for its work and thanked the people and Government of the host country for their hospitality.

18. Finally, Mr. Héctor López Estremadouro, Under-Secretary of the Ministry of Education and Culture of Uruguay and Chairman of the session, said that his Government and he himself were most pleased at the success of the deliberations. He trusted that the appraisal and recommendations made by the Committee at its ninth session would stand as significant guideposts in the subsequent evolution of the Vienna Programme of Action. Clearly, much remained to be done, particularly

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in view of the current crisis which called for ingenuity and imagination to be used in the search for solutions and for the strengthening of regional co-operation. After expressing his Government's appreciation for the valuable collaboration of the Secretariat, he declared the session closed.

II. SUMMARY OF THE DEBATE

19. At the first plenary meeting, the Director of the Industrial Development Division introduced the document entitled Latin America and the Vienna Programme of Action: Science and Technology for Development in the 1980s (E/CEPAL/CEGAN.9/L.2). After briefly summarizing its contents, he pointed out that the adoption of the Vienna Programme of Action represented a significant step in the review of the technological development of the region.

20. One delegation pointed out that national development and policy regarding science and technology could not be considered in the abstract but rather should be viewed within the political context of each country. He said he shared the critical appraisal contained in the document with respect to the scant impact of the VPA in the region and the slow pace of scientific and technological progress and urged the Committee at its current session to establish realistic objectives in line with the actual possibilities of the region. He noted that annex 2 of the document stressed the importance of giving detailed consideration to the incorporation of science and technology planning into the framework of national planning, from which it could not be separated. He also shared the views expressed in the document regarding future action and stressed that, in view of the scarcity of resources, special emphasis should be placed on those activities which would have the greatest multiplier effect, such as horizontal co-operation and the training of human resources. He stressed the need to train intermediate cadres in the traditional technologies and the importance of having extension workers who could help create a linkage between regional and national supply and demand in the area of science and technology. He shared the concerns expressed in the document with regard to the impact of the new technologies on the international division of labour and on domestic sources of labour. He suggested that interdisciplinary studies should be carried out to allow for planning based on concrete problems. Finally, university curricula should be reorganized to take account of the new situation with regard to science and technology.

21. Another delegation briefly summarized the situation of his country in the area of science and technology, stressing that the First National Plan for Science and Technology was being prepared within the framework of the Ministry of Planning and Co-ordination and would be completed during the course of 1984. He spoke of his country's successes in the areas of metallurgy and food. He referred to the training of human resources, which should be closely linked with universities and higher educational centres of the country; to financing, and to scientific and technological information, and said that his country maintained close contact with the Andean Technological Information System and other international systems. He stressed the need to strengthen research and development and the importance of horizontal co-operation in meeting the objectives proposed in the various fields.

22. One delegation, referring to the document under discussion, said that it contained an important and interesting diagnosis and that it would be useful to keep it up-to-date. At its current session, the Committee might wish to indicate a series of concrete points where regional action could lead to practical solutions to the development problems of the countries, such as the internal transfer of technology; sources of financing, including internal ones; comprehensive planning of science and technology as an element of development; emphasis on technology, and legislation on the transfer of technology to enable the region to enter the field of technology with a more positive attitude. Pointing out that all the aforementioned points would require adequate machinery, he urged the countries to adopt measures to enable ECLA to intensify its work in the area of science and technology.

23. Another delegation endorsed the appraisal presented. He said his country had made a sustained effort to promote the application of the Vienna Programme of Action, both domestically and internationally. He referred to the external factors that would influence technological development, such as the economic crisis and its effect on the obtaining of new resources and the progress of new initiatives. In this regard, he stressed the need to intensify the national efforts of the Latin American countries. Referring to the task facing the Committee of Government Experts convened by SELA to deal with the question, as well as to the efforts made at the Andean level, he said it would be most useful for ECLA to contribute to the strengthening of the activities carried out in that context.

24. Another delegation asked about the practical effects of the VPA, stating that the objective of the current session of the Committee should be to propose the activation of the Programme in the region, in order that the countries might become familiar with it and make proper use of it. In his view, excessive attention had been paid to financing, to the detriment of other aspects of the VPA. He suggested that the United Nations agencies, particularly ECLA, might carry out activities such as study seminars for university students with a view to acquainting the scientific community of the various countries with the VPA. He also referred to the importance of the activities of UNESCO and the CASTALAC II Conference to be held in Brazil in 1985. He added that the agenda of the meeting should be inspired on the VPA.

25. One delegation made some remarks regarding the situation of scientific and technological activities in Central America, pointing out positive aspects that should be taken into account in the analysis, including the activities of the Commission on Scientific and Technological Development of Central America and Panama and others at the subregional and national levels. With regard to the latter, he said that his country had completed a project for the strengthening of its scientific and technological capacity which would serve as the basis for creating a national science and technology system. He stressed the need for a closer link between universities and the business sector and for the promotion of national and regional activities in the area of consultant services and engineering. He said that external financing had been made available and the positive effects of these activities would become evident on the medium term. Finally, he said that aside from its negative effects, the crisis and the restriction of financing could also have a catalytic effect on national development, promoting, out of necessity, a search for solutions within the countries themselves.

26. In referring to some of the areas covered by the Operational Plan, another delegation said it would be advisable to create agencies to draw up policies for the formulation of plans for science and technology for development. He stressed the importance of having a system of statistics for scientific and technological activities. With regard to the development of human resources, he stressed the need to train qualified personnel through post-graduate programmes. With reference to the area of financing, he said there was a scarcity of institutions that provided risk capital or financed activities relating to science and technology. With regard to the strengthening of research and development and its linkage with the production system, he said he shared the views of the Secretariat to the effect that such linkages should be strengthened. Moreover, priority should be given to programmes and projects that helped build indigenous capabilities. He drew the attention of participants to the importance of bilateral South/South agreements, which should be complemented by subregional and regional action, and said that consideration should be given to the implications of the transformations that had taken place in the socio-economic context since 1979 should be considered.

27. The observer for an agency of the United Nations system stressed the efforts that had been made to develop policy instruments and said that, in his view, the central objective of activities in the area of science and technology should be to introduce and disseminate the elements which manage science and technology in society as a whole.

28. The observer for a specialized agency recalled that Latin America had participated actively in the Vienna Conference and had made great progress over the last 20 years, even though it had not reached the level anticipated. He expressed his concern at the fact that the educational system was lagging behind progress in science and technology.

29. The representative of a regional intergovernmental agency said that science and technology for development constituted one of the priority areas covered by its regional co-operation activities. He referred to some aspects of his agency's work and said that, in his view, the document to be produced at the current session should stress the need to bring researchers and users of science and technology together. Finally, he pointed out the negative aspects of the reverse transfer of technology.

30. At the last plenary meeting, after the document entitled Latin America and the Vienna Programme of Action, had been approved, the Committee agreed to ask the Secretariat, through the ECLA observer, to transmit the report of the session to the forthcoming session of the Intergovernmental Committee on Science and Technology for Development.

Part Two

LATIN AMERICA AND THE VIENNA PROGRAMME OF ACTION

1. The Committee of High-Level Government Experts, at its ninth session, held on 23 and 24 January 1984, devoted to a review of the implementation of the Vienna Programme of Action on Science and Technology for Development (VPA) and its Operational Plan, reviewed the events and trends of recent years in the region that related to the implementation of the Programme. As a result of this review, it identified and suggested the carrying out of certain activities aimed at increasing the effectiveness, within the regional perspective, of the implementation of the Vienna Programme of Action.

2. In initiating its debate, and bearing in mind the current situation of the region, the Committee stressed once again the crucial importance and the fundamental role of science and technology in the Latin American development process. Latin America would be able to deal with the challenges facing it in future to the extent that it built an indigenous scientific and technological capability aimed at achieving well-being for the majority of its peoples, within the framework of a democratic society.

1. Appraisal of the implementation of the Vienna Programme of Action in Latin America

3. Since the United Nations Conference on Science and Technology for Development was held in Vienna in 1979, some progress has been made in the areas of science and technology in the countries of the region. It is difficult, however, to determine accurately whether the scientific and technological progress made by the region since the Vienna Conference is the direct result of the provisions of the VPA, inasmuch as scientific and technological progress in the region in the past 20 years has been the result of a continuous and gradual process. The Vienna Conference served to strengthen national and regional proposals, conferring on them the support of the international community; it allowed for the crystallization of concern over the need to have an indigenous scientific and technological capability it served as a guidepost for the study of technological development in the region and in the developing world, and likewise helped to systematize the analysis of the contributions of science and technology to the aims of development.

4. In recent years, the region has made significant progress in the conceptualization of scientific and technological development, which has led to new approaches to research for the 1980s. Similarly, there progress has been made in the conceptualization of scientific and technological policies, although a review of the approaches proposed is needed in the light of the advances in new technologies and the new socio-economic context of the region in the 1980s.

5. Together with this progress there are still differences -sometimes greater than before- between the countries of the region as regards their scientific and technological capability. This difference tends to reflect, among other things, the different levels of economic and social development.

6. In the area of the development of scientific and technological infrastructure, the changes were relatively minor. As regards the transfer of technology, some countries have dismantled their machinery for the regulation of imported technology while others have enlarged and improved it. There has not been an appreciable change in the training of human resources, but many countries of the region have continued to expand post-graduate programmes and develop secondary and university education in science and technology.

7. The financing of scientific and technological development has shown some variation, and to varying degrees, all the countries of the region have felt the impact of the economic crisis and the austerity in public expenditure, as well as a reduction in real terms of transfers of resources for development, which resulted in a reduction of the resources available for science and technology. Some progress has been made in the creation of information systems, particularly in the setting up of subregional and regional networks. An effort was made to orient research activity by linking it to the production sector, with different results in different countries of the region. Regional and international co-operation activities have increased, although some of the bilateral, subregional and regional schemes and arrangements for co-operation with countries outside the region are in their initial phases.

8. The progress made by the region since the approval of the Vienna Programme of Action was on the whole modest. This situation may be attributed to several factors, both domestic and external, which have affected the different countries of the region in different ways, including the following:

- a) the reduction of total resources devoted to science and technology;
- b) the lack of linkage between scientific and technological research and the production sector;
- c) the deficiencies in scientific and technological planning systems;
- d) structural problems of an economic and social nature;
- e) the consequences of the world economic crisis, and
- f) the exodus of qualified personnel brought about by political, economic and social conditions.

As regards the internal and external factors which typify the economic crisis of the region, the Committee reaffirms the concepts which were agreed on at the Latin American Economic Conference, held in Quito from 9 to 13 January 1984, and at the eighth session of CEGAN, held in Montevideo from 18 to 23 January 1984, in the context of the appraisal of the implementation of the International Development Strategy for Latin America and the Caribbean.

9. A group of factors which will have a decisive influence on the scientific and technological prospects of Latin America is related to scientific and technological progress at the world level. The advances made in solid state physics and molecular biology have given rise to new technologies which are

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transforming the structure of production activities. For example, the increasing application of microelectronics may, over the medium term, introduce a significant change in the lifestyle of the industrialized countries that would also have a considerable effect on activities in the developing countries. The maladjustments that are being caused in the employment structure of the industrialized countries as a result of the "microelectronics and data-processing revolution" will change patterns of consumption, of industrial production and of international trade. This will have a significant but as yet unpredictable effect on the region, particularly as regards certain comparative advantages which will have a decisive impact on many of its exports of manufactures.

10. Similarly, advances in certain areas such as biotechnology and, especially, genetic engineering, may affect a large number of industrial and agricultural activities, ranging from plant breeding and food processing to the production of antibiotics, as well as various other activities such as the concentration of minerals by means of bacteria, the production of bioinsecticides and the processing of hydrocarbons.

11. In conclusion, this analysis indicates that in order for the VRA to be fully implemented, a great effort must be made to achieve a higher level of articulation and consistency among the activities envisaged in it.

2. Proposals for future action

12. Under the existing circumstances, when aspects relating to finance, production and international trade are all working together in the region to create a serious economic recession, with an aggravation of inflation, a deterioration of real income and a level of external indebtedness that is without precedent in the economic history of the region, and in order substantially to improve the implementation of the Vienna Programme of Action in the Latin American region, the Committee considers that the following measures should be put into effect:

a) To identify criteria and procedures that will increase the efficiency and effectiveness with which resources are used to strengthen the scientific and technological capability of the region and its contribution to economic and social development.

b) To promote mechanisms for horizontal co-operation among the countries of the region by studying and proposing measures aimed at strengthening machinery for promoting, mobilizing and co-ordinating international co-operation, particularly at the intra-regional level, that will facilitate the integration of the efforts of all the intergovernmental bodies and agencies working in the region within this same programme framework.

c) To modify, at the national level, the political, economic and social conditions that have contributed to the exodus of qualified personnel from the countries of the region.

d) To regulate the importation of technology built into capital goods, and, insofar as possible, reorient the demand for such goods towards suppliers in the region.

/e) To

e) To conduct an ongoing appraisal of the participation of transnational corporations in scientific and technological activities in the region, in order to monitor practices of transnational corporations that work against national policies aimed at developing science and technology.

f) To study carefully the question of complementarity and balance between the importation and the local generation of technology in specific activities.

g) To study and propose special measures for increasing the flow of financial resources from international co-operation for science and technology to promote the development of the countries of the region, particularly the less developed ones.

h) To adopt specific measures for protecting and promoting national capabilities in the areas of engineering, consultant services and technological management and to promote the export of services in these areas.

i) To promote and systematize technology extension mechanisms with a view to introducing them into the society and training direct agents in the use of the technology;

j) To stress the importance of standardization, measurement and quality control as fundamental elements of so-called scientific and technological services on which the generation and application of scientific and technological development largely depends. To consider how they contribute to the organization of trade; the rationalization of the use of materials, parts and accessories; the protection of the interests of users and consumers, and the protection of the environment and how they may be used as a vehicle and as an element for organizing the transfer of technology.

k) To combine the choice of areas of concentration with scientific and technological co-operation in order to go beyond a critical mass of personnel, equipment and financing that will make it possible, at least in a limited number of areas, to generate technology based on scientific discovery and reach the frontiers of knowledge.

l) To give explicit consideration to the scientific and technological aspect of all responses designed to deal with the crisis, as was the case with the Regional Programme of Action for Latin America in the 1980s, which envisages, for the end of the decade, the following action: i) the allocation to science and technology of resources equivalent to twice the present percentage of the gross domestic product; ii) a search for mechanisms for facilitating the supply of technological innovations and their incorporation into the production process (linkage between the supply of and the demand for technology); iii) the opening up and disaggregation of technological packages, especially those included in contracts with transnational corporations; iv) harmonization in the treatment of outside technologies, and v) technological extension to benefit small and medium-sized enterprises.

m) To bring existing scientific and technological capabilities up to adequate levels and direct their expansion towards the new social problems that arise from the serious situation now being experienced by the region, which have increased the demand for scientific and technological knowledge that can help improve living conditions in the rural and marginal urban environments, help create jobs, help provide low-cost services and help preserve the environment.

/n) To

n) To identify and select areas that have priority for Latin America from among the activities envisaged in the Operational Plan and the interdisciplinary fields of science and technology in which regional study and action should be emphasized.

o) To strengthen programmes for the training of researchers, technical personnel and entrepreneurs in priority aspects of scientific and technological training and its incorporation into economic and social development. Similarly, to consider in particular the establishment of conditions for greater linkage and co-ordination between governments and universities and the private sector.

p) To pay special attention to the need to link and integrate scientific and technological policies with economic and social development plans and programmes.

q) To pay special attention, because of the special characteristics of the problem and its serious implications, to the gap -which is increasingly evident- between the development of scientific and technological systems and the development of educational systems.

3. Recommendations to international and regional bodies

13. ECLA should participate more actively in the area of science and technology for development in order to integrate it into the Latin American development process. To this end, it should co-ordinate its work with that of UNCTAD and of other agencies of the United Nations system, as well as with other agencies of regional scope.

14. The international, regional and subregional agencies working in Latin America in the field of science and technology should orient their action within the framework of the VPA and the Operational Plan thereto, co-ordinating their activities and programmes so as to optimize the utilization of the scarce resources available.

15. The international, regional and subregional agencies working in Latin America in the field of science and technology should make every effort to ensure that the workshops they organize to promote regional co-operation mechanisms promote a better knowledge of the VPA.

16. With respect to the structuring of the United Nations Financing System for Science and Technology for Development, the countries of the region reaffirm their rejection of the concept of distribution of the burden advocated by the developed countries for the setting up of this fund.

Annex 1

LIST OF PARTICIPANTS

A. States members of the Commission

ARGENTINA

Representative: Carlos Rafael Abeledo, Under-Secretary for Promotion, Secretariat of Science and Technology

Alternate

Representative: Emilio Ramón Pardo, Chargé d'Affaires of the Argentine Delegation to ALADI

Members of the Delegation:

María Cristina Boldorini
Juan José Martínez

BOLIVIA

Representative: Mario Reyes Chávez, Ambassador of Bolivia to Uruguay and Representative to ALADI

Members of the Delegation:

Isaac Maidana
María Julia Quiroga

BRAZIL

Representative: Francisco De Lima E Silva, Counselor, Head of the Department of Scientific and Technical Co-operation of the Ministry for Foreign Affairs

CHILE

Representative: Carmen Luz Guarda, Counselor, Head of the United Nations Department, Ministry for Foreign Affairs

Members of the Delegation:

Guillermo Anguita Pinto
Hernán Brantes

COLOMBIA:

Representative: Santiago Salazar Santos, Ambassador of Colombia to Uruguay

Alternate

Representative: Guillermo Triana Ayala, Minister Counselor of the Embassy of Colombia in Uruguay

COSTA RICA

Representative: Carlos Luis Pacheco Ramirez, Economic Advisor, Ministry of Planning

Members of the Delegation: Jorge Leiva Gómez

CUBA

Representative: Ramiro León Torras, Head of the Department of International Economic Organizations

Members of the Delegation: Abelardo Moreno Fernández
Héctor Rodríguez Cruz

DOMINICAN REPUBLIC

Representative: Manuel E. Guerrero Pou, Ambassador of the Dominican Republic to Uruguay

ECUADOR

Representative: Luis King Vanoni, General Secretary for Planning

Member of the Delegation: Francisco Martínez Salazar

EL SALVADOR

Representative: Luis Eduardo Meléndez Flores, Vice-Minister of Finance

GUATEMALA

Representative: Juan José Rodas-Martínez, Ambassador Extraordinary and Plenipotentiary of Guatemala to Uruguay

Alternate

Representative: Ofelia Arreaga de D'Acunti, First Secretary of the Embassy of Guatemala in Uruguay

HONDURAS

Representative: Alejandrina B. de Coates, Chargé d'Affaires of the Embassy of Honduras in Uruguay

MEXICO

Representative: Arturo González Sánchez, Ambassador of Mexico to Uruguay and Representative to ALADI

Members of the
Delegation:

Víctor Alvídrez Chávez
Asdrubal Flores
Eduardo Santillán Tiscareño
Osvaldo Valdéz Olivares

NICARAGUA

Representative: Enrique Sáenz Navarrete, Director of International Economic Relations, Ministry for Foreign Affairs

PANAMA

Representative: Mario H. Ortiz, Ambassador of Panama to Uruguay

PARAGUAY

Representative: Amado Martínez Rojas, Counselor of the Embassy of Paraguay in Uruguay and Alternate Representative of Paraguay to ALADI

Alternate

Representative: Alberto A. Vergara, Counselor of the Embassy of Paraguay in Uruguay

PERU

Representative: José Carlos Mariátegui A., Ambassador, Under-Secretary for Economic Affairs and Integration

Alternate

Representative: Felipe Cebrecos Revilla, Director, Central Reserve Bank of Peru

Members of the
Delegation:

Hugo De Zela Martínez
Luis Pacheco Romero
Raúl Torres

URUGUAY

Representative: Héctor López Estremadouro, Under-Secretary, Ministry of Education and Culture

Members of the
Delegation:

José Austt Pedrón
Aldo Béri
Tabaré Bocalandro
Ana Cazzadori de Ferenczi
Luis G. Chaparro González
Olga Alicia Falco
Heber Freiria
Susana Pacheco

VENEZUELA

Representative: Carlos Bivero, Director, International Economic Organizations,
Foreign Trade Institute (ICE).

Alternate

Representative: Jenny Clauwaert González, Second Secretary, Permanent Delegation
of Venezuela to ALADI

B. United Nations Secretariat

United Nations Centre for Science and Technology for Development (UNCSTD)

Amílcar F. Ferrari
Phactuel M. Rego
Francisco Sagasti

Regional Commissions Liaison Office

Alexander Cornelissen

United Nations Industrial Development Organization (UNIDO)

Janet Bancroft
Luis Soto-Krebs

C. Specialized agencies

Food and Agriculture Organization of the United Nations (FAO)

Juan Carlos Acosta Cordero

United Nations Educational, Scientific and Cultural Organization (UNESCO)

Gustavo Malek
Juan Carlos Anselmi
Christian Gischler

World Health Organization (WHO)
Pan American Health Organization (PAHO)

Gloria A. Coe
Ellen Edwards Wasserman
Jorge Peña Mohr
Vladimiro Rathauer

D. Intergovernmental organizations

Latin American Integration Association (ALADI)

Eduardo Alcaraz Ortiz
Héctor Romero Crampet

Intergovernmental Committee for Migration (ICM)

Guillermo Cruz Duque

Permanent Secretariat of the General Treaty on Central American Economic
Integration (SIECA)

Juan Alberto Hernández H.

Latin American Economic System (SELA)

José Carlos Barona

E. Attending by special invitation

Héctor López Alvarenga, Chairman, Commission for Scientific and Technological
Development of Central America and Panama (CTCAP)
Enrique Martín del Campo, Executive Secretary for Science, Education and Culture,
Organization of American States (OAS)

F. Secretariat of the session

Economic Commission for Latin America (ECLA)

Enrique V. Iglesias, Executive Secretary
Norberto González, Deputy Executive Secretary for Economic and
Social Development
Daniel Blanchard, Acting Secretary of the Commission
Roberto Matthews, Director, Joint ECLA/UNIDO Industrial Development
Division
Joaquín Izcue, Co-ordinator, Science and Technology Unit

Annex 2

LIST OF DOCUMENTS

- | | |
|---------------------|---|
| E/CEPAL/CEGAN.9/L.1 | Provisional agenda |
| E/CEPAL/CEGAN.9/L.2 | Latin America and the Vienna Programme of Action: Science and Technology for Development in the 1980s. |
| A/CN.11/12 | Operational Plan for the Implementation of the Vienna Programme of Action on Science and Technology for Development |
| A/CN.11/36 | Implementation of the Vienna Programme of Action on Science and Technology for Development |
| A/CONF.81/16 | Vienna Programme of Action on Science and Technology for Development |

