UNITED NATIONS

ECONOMIC COMMISSION
FOR LATIN AMERICA
AND THE CARIBBEAN - ECLAC

Distr.
LIMITED

LC/L.519
20 November 1989

ENGLISH
ORIGINAL: SPANISH

REPORT OF THE SEMINAR ON ENVIRONMENTAL IMPACT ASSESSMENTS AS AN INSTRUMENT OF ENVIRONMENTAL MANAGEMENT. SITUATION AND PROSPECTS IN LATIN AMERICA AND THE CARIBBEAN

(Cartagena, Colombia, 3-7 April 1989)

89-9-1476

CONTENTS

Preface

1. This report contains general background information and a summary of the discussions and recommendations of the working groups set up by the seminar on Environmental Impact Assessments as an Instrument of Environmental Management. Situation and prospects in Latin America and the Caribbean.

2. The seminar was organized jointly by the Economic Commission for Latin America and the Caribbean (ECLAC), the Latin American and Caribbean Institute for Economic and Social Planning (ILPES), the Instituto Nacional de los Recursos Naturales Renovables y del Ambiente of Colombia (INDERENA), and the Carl Duisberg Gesellschaft Society (CDG), of the Federal Republic of Germany, which provided financial and technical support.

3. This seminar also forms part of the activities and output of the ECLAC/UNEP project on "Technical Co-operation for the Integration of Environmental Considerations into Latin American Development Planning, Phase II" which is being carried out by the Joint ECLAC/UNEP Development and Environment Unit.

I. BACKGROUND AND OBJECTIVES

4. The initiative to organize this meeting arose from the growing concern about the co-ordination of development programmes and projects with the need to preserve the environment. In pursuit of this objective, various instruments of environmental management have been developed, and among these instruments, increasingly frequent use is being made of environmental impact assessments (EIA).

5. While the Latin American region has already had some experience with this type of assessment, its legal and institutional aspects still need to be strengthened and certain technical and operational difficulties still remain to be overcome. In view of this situation, and in response to the concern expressed in circles involved with the subject of the environment, both at the government level and at the level of the academic and non-governmental sectors, the agencies which organized the seminar from which the present report has emanated, undertook to organize a meeting of experts in order to promote greater awareness of the current situation in the field of environmental impact assessments.

6. The general objective of the seminar was to obtain a clear view of the situation regarding this type of assessment in the participating countries based on their experiences. Identifying the most urgent needs and the principal problems would contribute to the formulation and proposal of initiatives aimed at promoting co-operation among the countries, international technical assistance, and the training of professionals, all of which activities are designed to enhance the effectiveness of this instrument of environmental management.

7. The following specific objectives were established:

a) To learn about the experience of the countries represented in the conduct of environmental studies and to identify the legal, institutional, operational and methodological requirements for an efficient EIA system.

b) To identify the specific characteristics of the various agents involved in carrying out EIA's (public bodies, academic centres, consultancy firms, community organizations, private companies, etc.), with a view to clarifying the role played by each one of them in a national system for the conduct of EIA's.

c) To identify gaps in knowledge, obstacles to implementation, problems of information and research requirements which must be met.

d) To establish the training requirements at the various operational levels in order to promote the EIA as a decision-making instrument in the implementation of development projects.

e) To learn during the meeting of environmental case studies undertaken in the countries represented and in the Federal Republic of Germany which reflect the experiences of the countries.

f) To compile available documentation on the case studies presented and to incorporate it, as far as possible, into the teaching material used in the training activities conducted by ECIAC and ILPES. Also, to disseminate the documentation and results of the seminar to interested parties from other countries of the region.

g) To promote the exchange of experiences at the regional level, with three principal purposes: to establish the basis for technical assistance and horizontal co-operation; to prepare a set of recommendations and conclusions for the consideration of those countries which make little use of these instruments, and to propose specific initiatives which may be taken by the international organizations.

II. PARTICIPANTS AND ORGANIZATION OF WORK

Place, date and participants */

8. The seminar, "Environmental impact assessments as an instrument of environmental management. Situation and prospects in Latin America and the Caribbean", was held from 3-7 April 1989, in the Colombian city of Cartagena de Indias, in the conference rooms of the Caribe Hotel, situated in Carrera 1a., No. 2-87, Bocagrande. Support services were provided by the local and national office of the Instituto de Desarrollo de los Recursos Naturales Renovables y del Ambiente (INDERENA), of Colombia.

9. The seminar was attended by 52 experts from Argentina, Colombia, Mexico and Venezuela, attached to public sector environmental institutions, consultancy firms conducting environmental studies, enterprises that promote development projects, regional and sectoral development bodies, as well as community representatives. Also in attendance were two experts from the Federal Republic of Germany, and representatives of the Central American Bank of Economic Integration (CABEI), the Inter-American Development Bank (IDB), the Pan-American Centre for Human Ecology and Health (ECO), an agency of the Pan-American Health Organization (PAHO), and the Permanent Commission for the South Pacific (CPPS). In order to ensure a wider dissemination of the work of the seminar, a number of observers involved in activities directly linked to the subject of the seminar were also invited to participate.

Opening meeting

10. On behalf of the institutions that organized the seminar, the following speakers outlined to the participants the objectives of the meeting: Mr. Nicolo Gligo, Co-ordinator of the Joint ECLAC/UNEP Development and Environment Unit of ECLAC; Mrs. Karin Gauer, representative of the Carl Duisberg Society of the Federal Republic of Germany, and Mr. Eduardo Del Real, acting General Manager of INDERENA, who welcomed the participants.

---

*/ See list of participants in annex 1.

Co-ordination

11. During the five days which the meeting lasted, the discussions were moderated alternately by Mrs. María Inés Bustamante and Mr. Nicolo Gligo, both of the Joint ECLAC/UNEP Development and Environment Unit; Mr. José Leal of ILPES and Miss María Fernanda Pulido of INDERENA.

Structure of the seminar

12. The seminar was divided into two parts:

a) In the first part, papers were presented and the previously selected studies on environmental impact on the participating countries were discussed. The presentation of each case was made from various perspectives. For this reason papers were presented by the principal agents or entities that participate in the assessment of the environmental impact of a project. In this way, for most of the cases presented, the following points of view were given: that of the enterprise promoting or heading the project; that of the consultancy firm that carried out the environmental impact assessment; that of the regional or sectoral development agency involved; and that of the community affected.

b) During the second stage of the seminar the participants were divided into four working groups, each of which was required to examine a specific subject and to conclude its discussions with conclusions and recommendations. The working groups undertook an in-depth examination of the following topics: the role of the State, the contribution of consultancy firms, training needs, and community participation. Moreover, an entire morning was devoted to an interesting tour of the Bahía de Cartagena and a visit to the installations of the Colombian Petroleum Enterprise (ECOPETROL). On that occasion, the authorities of INDERENA explained to the participants the various aspects and conflicts of an environmental nature which affected that region.

Agenda **/

13. The seminar examined the following subjects:

a) Aspects of international co-operation in the field of environmental impact assessments, on the basis of the experiences of the following organizations:

Inter-American Development Bank (IDB)
Central American Bank for Economic Integration (CABEI)
Permanent Commission for the South Pacific (CPPS)
Pan-American Health Organization (PAHO).

**/ See list of documents in annex II.

b) Presentation and discussion of the case studies selected by countries:

Venezuela	Environmental study for a pulp and paper plant in the Orinoco Region. Environmental study for the installation of a carborundum plant.
Federal Republic of Germany	Study on the installation of an Essenberger Brunch solid wastes deposit. Comparative study of areas in which waste deposits have been sited in Cologne.
Mexico	Environmental study for the Atasta/Pemex City Gas Pipeline in the region of the Pom Lagoon.
Colombia	Environmental study for the Coal-Mining Complex of El Cerrejón, Northern Zone, in La Guajira.
Argentina	Environmental study for the integral exploitation of the Hydroelectric Works on the middle reaches of the Paraná river. Environmental study of the mining and energy-producing activities in the Province of Mendoza.

c) Activities of working groups examining the subjects of the role of the State, the contribution of consultancy firms, and the needs of the community for training and participation.

d) Presentation of conclusions and recommendations.

III. SUMMARY OF DISCUSSIONS

Agenda item 1

Aspects of international co-operation in the field of environmental impact assessments

Inter-American Development Bank (IDB)

14. The representative of the IDB described the activities and procedures which that institution undertook in order to ensure that the development projects submitted for its consideration effectively incorporated environmental aspects. The Bank sought to ensure that such projects were selected, designed and evaluated on the basis of a process of optimization. For this purpose, the processing of a project application includes the following basic elements: i) environmental definition of the project; ii) application of the principle of internalizing the costs of the measures taken to mitigate adverse environmental effects; iii) action to resolve intersectoral conflicts arising from the environmental impact assessments; iv) risk management through the identification, quantification, and elaboration of preventive measures; and v) management and administration of unknown risks through further research.

15. He also explained certain aspects of the procedures adopted by the IBD to guarantee the effective incorporation of the environmental dimension. In that regard, he stressed the great responsibility borne by all the professionals involved in the analysis and evaluation of the environment. The Bank was promoting the parallel development of the EIA and of the process of project elaboration by guaranteeing, in that way, the timely incorporation of environmental considerations; in addition, the IDB had established a Committee on the environment to reinforce that process and to give maximum clarity to the analysis of the environmental aspects of projects. The expert stressed that the IDB considered it vitally necessary for countries to strengthen their capacity to manage the environment since it was the countries themselves that formulated development projects and it was they that should carry out the corresponding assessments. In that connection, support was being given to national institutions and a number of country environmental studies were being financed.

Central American Bank for Economic Integration (CABEI)

16. The expert from the CABEI drew attention to the characteristics of the financial institution which he represented and to the socioeconomic context that characterized the Central American countries. Because of those two factors, the projects submitted for consideration were not usually large-scale. As in the case of the IDB, the main function of the Bank was to finance projects, and its concern for environmental aspects was reflected in the processing of project applications and the supervision of their implementation. In order to ensure that proper consideration was given to environmental aspects, the CABEI had developed specific procedures, which were included in the so-called System of Environmental Planning and Analysis (SPAA).1/ That system reflected a clear policy of the Bank, which in 1986 commissioned a study whose recommendations were endorsed by its Board of Directors.

17. During his presentation, he explained in detail the objectives, origin and components of the system; moreover, he drew attention to the current situation and to the prospects for its implementation. The SPAA was defined as a set of subsystems which permitted the incorporation of environmental considerations at the various technical and the decision-making levels at which strategic investments are analysed from different perspectives: technical, socioeconomic, financial and environmental.

18. The expert referred to the four subsystems:

a) The assessment subsystem, already defined in a publication of the bank, which explained the use of the instruments and techniques of the environmental analysis and monitoring of projects; the corresponding document detailed the procedure for carrying out the environmental study, including the matrices considered to be the most suitable for those purposes.

b) The subsystem of the operational and organizational procedures, which detailed the modalities for the utilization of techniques within the context of the operational system of the Bank, with a view to speeding up the process.

c) The information and environmental monitoring subsystem, which included the data base and cartographic information (an activity that was due to be initiated shortly thereafter under an agreement with the Tropical Agronomy Center for Research and Teaching (CATIE)).

d) The subsystem of technical advisory services and training in the field of the environment, in respect of which it was pointed out that the CABEI should begin to train its own officials in order to later extend those activities to various national institutions.

19. That system employed by the CABEI sought to ensure that the environmental dimension was taken into account throughout the process of elaboration, evaluation and follow-up of projects; however, for the system to be effective, it is important for the Bank to be acquainted with the projects as early as the preinvestment phase. In that regard, he drew attention to the need for countries to participate in the process by undertaking environmental

impact assessments at the national level. In view of the costs involved in those studies, he recommended that an evaluation be made of the need to undertake them in each specific case. With regard to the projects already approved and those underway, the CABEI had carried out environmental impact assessments and had promoted the incorporation of palliative measures where it was considered advisable to do so.

Permanent Commission for the South Pacific (CPPS)

20. The expert representing the CPPS drew attention in his presentation to the various international legal instruments on EIA's, particularly those related to the protection of the marine environment. Those instruments included the Agreement on the prevention of ocean pollution through the dumping of waste and other materials (London, 1972), and The United Nations Convention on the Law of the Sea (Montego Bay, 1982). He also drew attention to the decisions of the Administration Board of the UNEP, mentioning among the most recent ones adopted, Montreal Guidelines for the Protection of the Marine Environment against Pollution from Land-based Sources (decision 13/18 II, of Board of Administration of UNEP, May 1985), and the Cairo Guidelines and Principles for the Environmentally Rational Management of Dangerous Waste (decision 14/30 of The Board of Administration of UNEP, June 1987).

21. He next described the background and the current state of the incorporation of EIA's into the South Pacific system, through the Regional Regulations associated to the Plan of Action for the Protection of the Marine Environment and the Coastal Areas of the South East Pacific. As a follow-up to the resolutions adopted at the meetings of the Permanent Commission for the South Pacific, the CPPS had undertaken a series of activities aimed at the effective implementation of the EIA. Those activities included the following:

a) Seminar workshop on environmental impact assessments in the marine environment and coastal areas of the South East Pacific, held in Santiago, Chile, in November 1983, with the support of ECLAC.

b) Training of experts from the region in the preparation of a study based on the guidelines established by the Mixed Group of Experts on the scientific aspects of ocean pollution (GESAMP), held in Bangkok, Thailand, in November 1984.

c) CPPS/UNEP/ECLAC Workshop on the assessment of the environmental impact of potentially harmful substances deriving from coastal sources on the marine environment: study of a case in Chile, Concepción, Chile, December 1984.

d) Workshop on assessing the environmental impact of port development: the case of Guayaquil, Ecuador, November, 1986.

e) CPPS/UNEP/ECO (PSO) regional course on basic techniques and methodologies for assessing environmental impact in the South East Pacific, Cali, Colombia, February 1988.

22. The expert also drew attention to the fact that the CPPS, through a resolution of the III Intergovernmental Meeting of the Plan (1987), had recently prepared a draft protocol for undertaking environmental impact assessments in the South East Pacific system, which would serve as a basis for the implementation of the Agreement on the Protection of the Marine Environment and the Coastal Areas of this region. That draft, prepared by the CPPS in consultation with UNEP and the International Union for the conservation of nature and natural resources, was to be considered shortly thereafter at a meeting of experts; the draft set forth the current needs in the area of the exchange of information, the requirement that environmental impact assessments should be undertaken, the elaboration of technical guidelines, designation of a competent national authority, formulation of legal guidelines, determination of effects on third states, and the opinion of the national community, among other matters.

Pan-American Health Organization (PAHO)

23. The expert representing that international organization drew attention to the fact that since the 1970s and particularly in the last part of the current decade, the PAHO, through the Pan-American Center on Human Ecology and Health (ECO) had begun to concern itself with environmental impact assessments, particularly as they related to the impact on human health (EIAS). Those actions were taken in pursuance of the mandates approved by their governing organs, which had identified the main harmful elements generated by economic and social development plans and projects on human health and on the environment.

24. Those mandates had resulted in a series of important publications on the subject, in direct technical assistance programmes to countries, in joint programmes of analysis, and in meetings with other regional bodies, such as the IDB, UNEP, ORPALC, and the CPPS. After 1984, and during the period 1984-1988, more than 30 course/workshops on that subject were conducted in the region. The workshops stressed, in particular, the dimension of health within the subject area of environmental impact assessments for development projects. More than 1 000 technical personnel from different fields, working at management levels in the various sectors in question, participated in those activities.

25. He assured the meeting that PAHO and ECO would continue to support initiatives in that area. In that connection provision had been made for the preparation of new publications, the development of methodologies, and the promotion of the participation of the health sector of countries, in order to incorporate in a timely manner measures for assessing the environmental impact of the various economic and social development projects.

Agenda item 2

Presentation and discussion of the selected case studies

Venezuela

26. The Venezuelan experts described the situation of their country in regard to environmental impact assessments and to the case studies selected for analysis. From the public sector, the experience of the Ministerio del Ambiente y de los Recursos Naturales Renovables (MARNR) was presented.2/

27. The Organic Law on the Environment, which embodied the national policy on the environment, conferred on that Ministry the responsibility for identifying those projects which required environmental studies and for defining the process to be followed for granting the corresponding permits. It could therefore be seen that that Latin American country had a highly developed legal/administrative framework governing EIAs.

28. In view of the high cost involved in conducting and reviewing such assessments, the MARNR had reserved the right to request them in those cases in which the project submitted for consideration was a large-scale one, with a national or regional impact, or which, because of its characteristics, could pose a threat to key environmental elements. The experts also presented the list prepared by the institution of activities which had the potential for degrading the environment, and that process was illustrated by the recent studies undertaken on investments in shrimping, which were currently experiencing a boom on the Venezuelan coast.

29. They next described the stages of the process of handling requests for permits and the characteristics which an EIA should have in accordance with the regulations in force. In that regard, it was pointed out that manuals were already available whose contents had been prepared by the Office of Technical Standards of the Ministry and which set forth the requirements with respect to methodologies and other aspects of the studies.

30. The experts were of the view that the fulfilment of those conditions would facilitate the preparation of a useful document to enable environmental authorities to make decisions regarding projects likely to degrade the environment and to demand guarantees for the prevention of possible damage.

31. In order to illustrate the current situation in Venezuela, they presented the environmental study prepared for a pulp and paper plant,3/ which was due to be set-up in the Orinoco region, the project for which had been designed in 1986. The presentation was made by an expert who had participated in the team responsible for preparing the study.

32. The project in question consisted, in its initial phase, of the construction of a plant for the manufacture of pulp using a chemothermal mechanical process and for the manufacture of newsprint from the same pulp. After outlining the technical and economic characteristics of the project in

question, the expert turned his attention to the EIA which had been undertaken.

33. In that case, the study was restricted to the first phase of the project and to its industrial phase; it omitted the silvicultural phase of the complex. The EIA followed a structure that was more or less typical in that its content was subdivided in accordance with the nature of the project, the nature of the environment, the identification and assessment of its impact and the proposal of measures.

34. During the presentation, a description was given of the measures that had been formulated for the phases of construction and operation. Although in that case the assessment had been undertaken after the feasibility study for the project, it was ready at the time when the executive project was being prepared and it was therefore to be hoped that the measures proposed could be incorporated in a timely manner.

35. Still in connection with the projects on Venezuela, the experts then described two other studies: the first on the environmental impact of the project for the exploitation of bauxite in the mountainous area of Los Pijiguaos, in the state of Bolívar, and the second on the processing of a request for the installation of a carborundum factory in Anzoategui.4/ The first case concerned a project for the extraction, grinding and transport of bauxite, which in accordance with Venezuelan norms, required a previous study of its impact on the environment.

36. The bauxite deposit extended over an area of 1 600 hectares, with proven reserves of 200 million tons and probable reserves of more than 1 billion tons. It had been calculated that the production target of US$250 million worth of bauxite could be achieved by the mid 1990s. The EIA had been focused on three elements: identifying and categorizing impacts according to their seriousness, the proposal of measures to counter the effects on the environment, and the analysis of the two dimensions of environmental sensitivity: the physical/biological and the socioeconomic.

37. In the EIA in question, 66 effects associated with the phase of construction were identified; of those, six were considered to be the most serious in that they resulted in the pollution of water courses. Those impacts could be the results of mining activities, central installations and access roads. It was also pointed out that changes could be expected in the cultural values of the native population on account of the far-reaching nature of the activities to be undertaken under the project, the damage to wooded areas and the intensification of certain processes of erosion.

38. The carborundum plant was backed by a transnational company and also supported by local entrepreneurs; the production target for that plant was 30 000 tons per annum of that abrasive product, principally intended for export. Although the Ministry of Development had initially approved the project, the Ministry of the Environment and of Renewable Natural Resources, which had to grant the permit for the use of the land on which the plant was to be established in the locality of Barbacoa, in the state of Anzoategui, denied permission.

39. Among the considerations which led the environmental authorities to refuse authorization for the installation of that productive unit were, on the one hand, the fact that the expected benefits would not offset the high consumption of subsidized energy and water, and on the other hand, the fact that the pollution which the operation of the factory would cause was unacceptable, and the costs involved in avoiding it would make the project uneconomical. On the basis of those and other considerations, it was concluded that while the financial balance was slightly favourable for the country, that did not compensate for the adverse environmental and social consequences to which it would give rise. It was felt that the project would mean accepting in the country a dirty and polluting industry, which exploited energy and cheap labour.

Federal Republic of Germany

40. In their first presentation, the German experts dealt at length with the legal and administrative aspects of environmental impact assessments in that country, and made interesting comparisons with the situation of other European and North American countries.5/ It was considered essential for the implementation of environmental impact assessments to fall within a compulsory juridical framework, which would establish minimum requirements of content and which would set out the procedures to be followed. However, the effectiveness of that instrument would depend on the use of adequate information, the application of a flawless methodology of implementation and its effective incorporation in the decision-making process.

41. During the first part of their presentation, the experts drew attention to the regulations which were necessary in order to follow up environmental impact assessments at the administrative level in accordance with the legislation in force; they next examined the requirements with respect to procedures and, thirdly, reviewed the administrative bases for the implementation of environmental impact assessments. With regard to the general legal conditions, it was considered necessary, inter alia, that greater political importance should be attached to EIAs, the possibilities of making such studies mandatory should be improved, and the assessments should be transparent to public opinion, to those affected by the project and for purposes of judicial monitoring. On that subject, attention was drawn to the link between the legal basis for EIAs and the juridical system in force; the areas of implementation of EIAs; and the subject of the participation of neighbouring countries in projects which had the potential to cause damage to the environment of more than one country.

42. He next drew attention to the fact that EIAs, by themselves, could not give rise to decisions on projects, but their purpose contributed to the preparation and improvement of decisions. He described the procedure of EIAs used to established the terms of reference: a declaration on the environmental impact is prepared, and (an aspect of great importance) the participation of third parties, both at the management level and the level of the public, is defined. Finally, they discussed the subject of the distribution of responsibilities and tasks between the promoter of the project and the authorities as part of the procedures for carrying out EIAs,

and a number of interesting considerations were raised with regard to technical capacity requirements and the cost of the studies.

43. In their second presentation, the West German experts discussed conceptual and methodological aspects and outlined an interesting analytical framework and the application of that framework to two specific cases.6/ The authors outlined a procedure which should be applied as a monitoring mechanism for analysing cases of environmental impact and facilitating the process of making useful and systematic decisions on projects.

44. In order to illustrate the usefulness of the methodology of analysis, a description was given of its application to two studies on environmental impact, which were prepared during the planning process for waste deposits. However, none of those studies formed part of a formal procedure for undertaking EIAs, since at the time of their preparation that procedure did not exist in the Federal Republic of Germany.

45. The first case analysed concerned the Essenberger Brunch solid waste deposit. On the basis of a plan for the construction of a waste deposit for a steel and iron plant, certain groups of citizens and parliamentarians commissioned a "study of the ecological conflicts" inherent in that plan, considering the damage and pollution to the environment that existed in that area. Subsequently, a report was prepared, which sought to define the degree and the development of the total potential for conflict for the area in question. After the details of the study were made known and an analysis carried out on the basis of the procedure presented, attention was drawn to those elements which, on account of their characteristics, conferred special interest on the study.

46. The second case presented was of a study on the choice of location for a deposit of dangerous wastes, which was commissioned by the head of the district of Cologne in order to select, among four alternatives, the most convenient location for the deposit in question. This case stood out as an example, in view of the extensive and detailed catalogue of those aspects that should be considered, the importance attached to local and supra-local plans, the consideration of location over the long term and the possible catastrophes and situations of risk. Another important point in that study was the detailed examination of the techniques of location. Finally they included proposals on the technical and organizational structuring of deposits and the supervising and registration of wastes, as well as on the formal procedure for making subsequent decisions.

Mexico

47. The Mexican experts commenced their presentations by dealing with the legal and institutional aspects which should govern the conduct of environmental impact assessments.7/ In that case, the EIA's were based on legislation contained in the General Law on Ecological Balance and on Protection on the Environment, in the Regulations provided for in that Law and on the Technical Ecological Norms established by the Secretariat for Urban Development and Ecology (SEDUE).

48. In one of its articles, the above mentioned law stipulated the type of activities for which an environmental impact assessment was required. In the case of projects designed for the exploitation of natural resources, it was required, not only to prepare a report on the impact of the activities on the resource exploited, but also on all the element of the ecosystems in the area of influence.

49. A detailed description was given of the instrument known as the environmental impact procedure, aimed at facilitating the understanding of and compliance with the laws and regulations that govern the process of EIAs. That instrument described the steps in the preparation and presentation of the manifestation of environmental impact, a document which, on the basis of the relevant studies, listed the significant and potential environmental impact which could be caused by an engineering work or activity and the manner of avoiding or attenuating it. The decision of the authority was expressed in the environmental impact authorization, which should establish the application of the measures of mitigation, compensation, restoration or control. It was pointed out that between 1983 and 1988, using the procedure mentioned above, the SEDUE reviewed 1 239 projects, on 942 of which a decision had been given so far.

50. The Mexican experts next presented the case of the environmental study prepared for the Atasta/Pemex City Gas Pipeline in the region of the Pom Lagoon.8/ In that case, the project was implemented by PEMEX between 1979 and 1981 and corresponded to a part of the engineering works of a larger project. On that occasion, although the environmental impact had not been assessed, on the basis of the requests submitted by the fishing co-operatives operating in the Pom Lagoon, a study was commissioned.

51. The experts gave a detailed account of the demands of the affected persons and the position of the enterprise undertaking the project. Considering that they were affected, the four co-operatives involved in the exploitation of clams requested the intervention of the Ministry of Fishing, an agency which had undertaken various studies evaluating that resource.

52. The environmental processes set in motion by the gas pipeline, according to the co-operatives, were associated with changes in the salinity of the water in the lagoon as a result of the inflow of fresh water (following the construction of canals for the gas pipelines), and with the destruction of the banks of clams following the dredging of a canal.

53. The study commissioned in that case had as its principal objective the evaluation of the quantity of clams lost as a result of the dredging of the lagoon. The period of time allotted for this study was limited to one month, which confined the research to aspects related to the volume of the resource and to estimates of the differences in the biomass attributable to project activities.

54. The results suggested that the loss attributable to the project was far less than claimed by the co-operatives, and the scarcity of the resource had been mainly due to its over exploitation. The case had turned out to be an example of an ex post environmental study, of relatively simple characteristics as regards the study itself, since it sought to establish

the levels of indemnity to be paid to the parties presumed to have been affected by the project.

Colombia

55. The Colombian experts presented the legal/institutional framework that governed the conduct of environmental impact assessments in that country.9/ The exploitation of the natural resources in Colombia required the prior approval of the National Institute of Natural Resources and of the Environment (INDERENA), an agency of the Ministry of Agriculture and Livestock Farming. That was established in the National Code on Renewable Natural Resources and Protection of the Environment and its corresponding regulatory decrees.

56. The need to undertake environmental studies was established in an article of the law, and constituted a prior requirement before INDERENA could grant the corresponding permit for construction. That institution established, in a specific manner for each project, the terms of reference of the study.

57. The case selected for presentation was the environmental study for the coal producing complex of El Cerrejón --northern zone, in La Guajira. A detailed description was given of the characteristics of the project by means of a presentation by an expert of the CARBOCOL-INTERCOR Association.10/ The project, located in a sparsely populated region in the northeast of the country was of great interest since it generated an exportable resource. It was one of the largest open-cast coal mines in the world. The components of the projects were described, namely, the mine properly speaking, the railway, the port of embarkation and auxiliary services.

58. Steps for the approval of the project were begun in 1980, a time at which INDERENA had begun its participation in it, when the contents which the study should have were defined. The chapters contained a description of the project and of the environment, an assessment of impacts, the recommendations for mitigating the problems and the programmes of monitoring.

59. The participants were subsequently informed of the characteristics of that study by an expert from the consultancy firm contracted to carry out the assessment.11/ The objectives and methodologies used in the study were determined by the scale of the project and by the environmental conditions of the area.

60. The assessment consisted of a reference base of the environmental conditions existing in the areas which were liable to be affected; identification of the activities to be undertaken under the project, which would alter the basic conditions of the environment; assessment of the principal environmental impacts; elaboration of practical measures to mitigate such impacts; the elaboration of programmes for monitoring certain areas and sources; the formulation of a recovery plan for the entire area affected; and the preparation of detailed documentation on the findings and recommendations of the study, to be incorporated in a national information system.

61. It was pointed out that throughout the period during which the studies were being undertaken, INDERENA had been permanently involved in technical and administrative activities, which were reflected in a set of data, technical concepts, and resolutions, all of which elements were expected to constitute a series of precedents for future studies on environmental impacts.

62. The presentations of Colombia were supplemented by papers presented by CORPOGUAJIRA,12/ a regional development agency, and by a representative of the indigenous communities settled in the project area.13/ In the first case, it was shown how a mining activity could, at any given time, give rise to institutional action for regional development. Indeed, royalties from the exploitation of coal permitted the establishment of CORPOGUAJIRA in 1983. That corporation was involved in activities in the following areas: development and management of renewable natural resources, assistance to indigenous communities, municipal assistance, and frontier integration.

63. The expert pointed out that, while the population in the human settlements in the project area of El Cerrejón was small, that could not be used as an argument to ignore the environmental impacts on them. It was necessary to bear in mind that the scale of the project was causing significant changes in the cultural, social and economic life of the region, and that the project would continue to operate over the next 20 years at least. In fact, the corporation was initiating a programme for monitoring, safeguarding and protecting the environment, with a view to following up the supervisory process that the enterprise executing the project was carrying out. While the effort being made by that enterprise to maintain the environmental quality of the area of influence was considered exemplary, there seemed to be some evidence of problems of pollution in the area.

64. From the point of view of the community affected by the coal mining project, attention was drawn to the fact that the EIA had not taken into account the specific characteristics of the indigenous population of the area of influence. Indeed, their views on the project had not been sought and the lands which they normally occupied were considered wasteland for purposes of the concession. The study did not prepare an ethnographic profile nor were the relevant socio-cultural variables identified. Attention was drawn to the fact that certain engineering works, such as the construction of the roadway, had caused the displacement of indigenous groups, while other engineering works had resulted in the loss of territory for their traditional activities of hunting and fishing. It was recommended that an assessment be made of the social, economic, and environmental costs and benefits of the project in relation to those communities, with a view to introducing the modifications which might be considered necessary in conformity with the development objectives of the region.

Argentina

65. On Argentina, an account was given of the background, the current situation, and the main problems and prospects in the task of incorporating the environmental dimension into development plans and project, as well as the efforts to institutionalize it within the state apparatus.14/ The various

institutional arrangements of a more sectoral nature that had been instituted with varying degrees of success in that country were reviewed. The establishment in 1987 of the Subsecretariat for Environmental Policy, within the General Secretariat of the Office of the President of the Nation, represented a significant step in the direction of the elaboration of a national policy on the environment, and the co-ordination of the various areas of national public administration with provincial authorities. In February 1989, the Subsecretariat was replaced by the National Commission on Environmental Policy, which, in addition to guaranteeing the continuity of the activities of that body, represented an expansion and reinforcement of its functions.

66. In the case of Argentina, legislation dealt with sectoral or partial aspects of the environment and was dispersed throughout various national, provincial and municipal levels. There existed, inter alia, mining codes; national laws governing hydrocarbons, electrical energy, industrial development, occupational health and safety, protection of water, administration of public health works in the country, and norms to preserve the resources of the air. At the provincial level, there were also a number of laws governing the management of natural resources and the protection of the environment, among which mention might be made of the Law on the Environment in the Province of Córdoba, promulgated in 1985. At the municipal level, a large number of ordinances regulated urban planning and environmental pollution.

67. Environmental impact assessments were not covered by current national legislation. However, two resolutions of a sectoral nature were in force which set out the position of the authorities in the energy sector on the subject of environmental management. The first of those resolutions provided for the agencies executing engineering works to present to the Subsecretariat for Energy Planning an environmental impact assessment of the various proposed energy projects, and made provision, furthermore, for the costs of the study to be part of the total costs of the engineering works and its subsequent operation.

68. A special committee had elaborated the standard setting proposals which had been officialized in a second resolution and which formed part of the Manual de gestión ambiental para obras hidráulicas con aprovechamiento energético. The manual set out the spatial parameters of the studies, as well as the characteristics of overall and environmental management for each stage of the development of a project.

69. Another set of background information on that subject in Argentina was given in a presentation of a study carried out in Argentina entitled "Estudio ambiental para el aprovechamiento integral en la obra hidroeléctrica del Paraná medio".15/ The object of the project in question was the construction of engineering works for the exploitation of water resources in the middle reaches of the Paraná river, along a 600 kilometer stretch of the water course.

70. It was pointed out that the Paraná river was one of the largest river systems in the world. The main object of the project was the generation of electrical energy. However, the executing agency (Water and Electric Energy,

a State enterprise) had situated it within an environmental context, thus incorporating the multiple use of the resources and their integral exploitation (navigation, flood protection, land recovery, irrigation and drainage, etc.).

71. It was clear from the presentation that the repercussions on the environment from the various proposals for the exploitation of the water resources in the middle reaches of the Paraná river, as well as from the various options for the engineering works, had been examined together with the various stages of formulation of the project: prefeasibility, feasibility, implementation, engineering designs and the successive economic evaluations of the project. The process of incorporation of environmental considerations was integrated into the engineering studies. The case, which was examined in depth, had that important advantage in comparison with the ex-post studies, which were usually more frequently found.

72. The experts from Mendoza presented an environmental study on the energy and mining activities in the province of Mendoza.16/ The problem addressed, which was at the level of the provincial or regional planning process, was how to deepen the understanding of the phenomena of the physical subsystem, in view of the widespread distribution and the diverse nature of the mining and energy activities in Mendoza.

73. The characterization of the system had facilitated the preparation of a diagnostic study on the current situation and the short-term trends of the phenomena, as a basis for the planning for the uses or the social demand with respect to a specific environmental supply. In their presentation, the experts listed the principal methodological phases of the study: definition of objectives, inventory of resources, analysis of the capacity of the environment, elaboration of a plan for ordering the activities, and transfer of the results into management and legislation.

74. The study presented constituted more of an effort to obtain an environmental characterization of a region, which would serve as the basis for the elaboration of subsequent studies on specific aspects of environmental impact.

Agenda items 3 and 4

Conclusions and recommendations of the working groups

Group 1: The role of the State in carrying out EIAs

75. It was agreed that there was need for a state institution responsible for undertaking environmental impact assessments as an instrument for the protection of the environment, with the capacity to legislate and co-ordinate the agencies involved. Furthermore, land use planning and ecological rationalization should be promoted in accordance with the socioeconomic, cultural and political reality in question, so that the environmental impact assessments could fully play their role. The environmental variable should be

considered in any process of development and the environmental institution or authority should have the mechanisms that would permit it to reach the various sectors of the population, including systems of information on the environment.

76. The majority of countries, in one way or another and to a greater or lesser extent had environmental legislation. However, there were differences with regard to the standards applied in undertaking EIAs, particularly with respect to the most opportune moment for requesting it, the comprehensiveness of the assessment in accordance with the scale of the project, and other aspects. In any case, at the national level, it was necessary to establish specific procedures for regulating the implementation of EIAs. Environmental legislation as an instrument of management should include terms and periods for the review and granting of permits, which would avoid possible conflicts of a legal nature with the agency responsible for the project. It had been recommended that at the time of elaboration of the regulations, the principle of comparative law should be used and suitable mechanisms established that would permit the participation of the communities. More specifically, consideration could be given to the provisions of Royal Spanish Decree 1131 of 1988, which was very explicit in that regard.

77. The Officers of the seminar unanimously agreed that there was need to incorporate the communities involved in the development programmes, through co-ordination mechanisms, based on the principle that the environment and its resources should be handled according to the principle of a common heritage and the social value of the environment. Moreover, the State and the environmental authority should establish clear and stable rules of the game which permitted the productive sectors and state agencies to carry out their activities without entering into conflict with the environment.

78. It frequently happened that when, over and above the environmental authority, many institutions were involved in environmental planning and management and in the protection of the environment, conflicts arose from the very diversity of opinions, interests, resources, approaches, etc., which each institution represented. For that reason, it was necessary as far as possible to centralize activities or to ensure that there was proper co-ordination among the respective agencies.

79. State organizations had turned out in a number of cases to be the principal agencies responsible for the degradation of the environment, and it was therefore necessary for the environmental authority to have the seniority and necessary resources to properly implement environmental impact assessments. In order to facilitate that task, it was vitally important to have a complete and explicit standard-setting legal framework with an appropriate set of regulations, which should also take into account the institutional reality of the country, and determine the areas of participation of the various organizations.

80. The areas in which the environmental agency could co-operate with the sectoral implementing agencies were the following: i) establishment or strengthening of environmental units in each one of the executing agencies associated with the national environmental authority; ii) establishment of commissions or working groups to co-ordinate and harmonize activities around

specific tasks, defined for each situation. In no case should the commissions, groups and units assume the functions which, by their nature, should be performed by the national environmental authority.

81. In order to ensure a more effective use of EIAs as an instrument for the management and protection of the environment, standards or parameters of reference should be established which permitted the agencies involved to perform their tasks satisfactorily, taking into account the particular characteristics of the system and of the project. There was need for the prior establishment of harmonious environmental guidelines or frames of reference, which would permit the achievement of a certain balance among the agencies involved. In that regard, the ecological rationalization of the territory was of vital importance in facilitating the process.

82. The most important requirement for the proper implementation of the recommendations made in an EIA was the legal force that supported the incorporation of the results among the factors that determined whether a licence or permit should be granted for the implementation of a project. Particular attention should be paid to the conditions that existed in the areas of special interest, such as highly productive or fragile ecosystems, as well as areas that are valuable from the cultural, historical, etc. point of view. In that respect there was particular need for the country to have a legal environmental framework that was as solid and as complete as possible, with its corresponding regulations. All of that would permit it to fully comply with the environmental requirements for the granting of permits as well as to apply the corresponding sanctions in those cases where regulations were disregarded.

83. Attention was drawn to the advisability of finding a formula which permitted the quantification of ecological, economic and social damage, as an instrument for monitoring those activities that deteriorated the environment, and in turn, as a means of applying the corresponding fines and sanctions. The programmes for the recovery of the deteriorated environment could constitute a useful reference framework for providing feedback on the formula. The requirement with regard to finance, insurance or other economic guarantees could also be considered as an instrument of control. In any event, it was essential to have suitable mechanisms for monitoring and control as preventive instruments of protection. That process could be carried out through the direct participation of the State and/or through agreement with community groups, project personnel and consultancy firms. The environmental authority should ensure that the costs involved in restoring deteriorated areas were included in the original costs of the project. It was strongly recommended that the palliative measures to be applied should be provided for within the EIA, and it was towards that end that much of the efforts of the agency undertaking the project and the environmental authority should be directed through the intermediary of their committee or assessment office.

84. Objectivity in the review of the EIA by the environmental authority, particularly with respect to the perception of the points of conflict in each project and its location, was one of the most important aspects to be considered. Care should be taken to ensure that the EIA did not become a mere formality for obtaining permits, and it should therefore be ensured that the

content of the EIA provided sufficient elements for arriving at a decision and was genuinely considered using transparent procedures. In that regard, particular attention should be paid to the ecological rationalization of the territory in order to facilitate management.

85. Moreover, when an EIA was being carried out, it was very important to secure the participation of communities and environmentalist groups. A harmonious participation would avoid future conflicts arising from unawareness of the advantages of the project and/or of the distortion of the environmental and socioeconomic risks, all of which situations were attributable to the lack of information and timely communication between the actors involved. In that regard, promotion awareness campaigns, particularly where those were conducted in simple language, had an important role to play.

86. As a general conclusion it was stated that, even where there existed an environmental authority, appropriate legislation with its corresponding set of regulations and basic information input, the success of EIAs as an instrument of environmental management would depend on whether the environmental authority followed a rigorous procedure and on the process of monitoring and control of the project activities in all and each one of its phases. Where this is not done, all the human efforts and the resources used to implement the EIA would be wasted.

87. It was recommended that the environmental authority should be strengthened by granting it sufficient hierarchical status and adequate human and economic resources to enable it to fully achieve its objectives of the necessary environmental management to ensure that the current and future generations would have an acceptable quality of life and an appropriate environment.

Group 2: Role of consultants in carrying out EIAs

88. There had been considerable progress in the development of environmental consultancy services in Latin America in recent times, mainly on account of the need to incorporate environmental parameters in the conception, analysis, design and implementation of certain types of projects.

89. From the 1970s onwards, a number of countries had begun to elaborate environmental legislation, norms and resolutions aimed specifically at the protection of the environment. At the international level, on the other hand, the financial agencies understood the need to incorporate the environmental dimension into the formulation and evaluation of projects. One of the instruments of management which developed from that trend was the environmental impact assessment which in certain countries had currently become obligatory.

90. National environmental authorities and international credit agencies had begun to elaborate terms of reference for the preparation of environmental impact assessments. In the beginning, those terms had been ambiguous, their objectives and scope unclear, and they adopted uncritically foreign standards used in countries with high levels of industrialization. In general, the requirements for the undertaking of EIAs were directed to a certain type of

project, basically the large hydraulic engineering, industrial, petroleum and public works projects in general. That instrument of environmental management, despite the fact that it was of a preventive nature, had generally been used after the adoption of a series of decisions on the technical and economic viability of the project and on its utility; frequently, those decisions were aimed at complying with the formal requirements of legislation and standards, and in the best of cases, at mitigating and not preventing the impacts.

91. Activities associated with environmental consultancy services, to different degrees and with differing emphases in our countries, had been regulated and at the same time had contributed to the elaboration of the terms of reference and the methodological systems that should be used in the preparation of an EIA. It should be pointed out, however, that the correct formulation of the terms of reference was indispensable to the successful preparation of an EIA. In that regard, it should be pointed out that:

a) The State should define a general framework of reference on specific environmental issues for various categories of projects.

b) The agency contracting the EIA, on the basis of that reference framework and the specific nature of its needs, should be responsible for the details of the terms of reference.

c) It was recommended that a prior discussion be held between the State and the contracting party concerning the terms of reference. The consultancy service could play an important role in that regard.

d) The objectives of the EIA should be clearly set forth and described in the document.

e) Before the consultant could submit his recommendations, he should have some prior knowledge of the project and of its area of influence, and should have adequate time to prepare his report.

f) Environmental studies should be incorporated into the different stages of the process of the elaboration of a project and not only in the concluding stages. The scope of each study should be defined in accordance with the stage.

g) The contracting agency, the standard-setting body and the consultancy firm should be in permanent contact with each other during the preparation of the study to verify the appropriateness of the established terms, but at the same time there should be the necessary flexibility to incorporate required changes into the project.

92. Based on the Latin American experience, it was felt that consultancy services had played a significant role in the field of the environment and the use of such services had helped to improve development projects and projects geared towards production. The following may be listed as the favourable aspects of consultancy services on environmental issues:

a) They complement the technical capacity of the State, often limited on account of circumstances, or the lack of experience and trained personnel in public institutions.

b) They sometimes help to clarify the objectives of EIAs, to expand and supplement their terms of reference, and to elaborate techniques and instruments.

c) The structure of their organization give them greater mobility and flexibility in the carrying out of EIAs, which is generally reflected in the lower costs and shorter time periods for studies.

d) Through the services offered, the consultancy helped the user to comply with the environmental legislation in force.

e) Consultancy services contribute to the development and training of technical human resources specialized in environmental questions, sometimes absorbing and providing employment for technical and professional personnel in that field.

93. As negative aspects which could be mentioned in the case of the absence or deficiency in the standards-setting and monitoring mechanisms governing the contracting of consultancy services in the field of the environment, the following might be mentioned:

a) The commercial nature of many consultancy firms, which could encourage practices designed to increase the profit margin to the detriment of the quality of the study.

b) The awkward relationship which might develop between the firm and the State in the sense that the State could favour certain enterprises, liberalizing the requirements of certain regulations and commissioning studies which were not necessary, or being excessively tolerant as regards the quality of the studies.

c) Where appropriate standards do not exist, contracting the services of a consultancy firm could result in a very limited transfer of technology from the enterprise to the State.

94. It was essential, moreover, for the environmental authority of the State to have qualified professional staff to define the terms of reference and the methodological systems which should be followed by the consultancy firms, as well as to evaluate, with sufficient authority, the content, conduct and results of the studies commissioned.

95. The complexity of some of the issues which must be dealt with in an environmental impact assessment made it necessary, in certain cases to contract international consultancy firms. Initially, such consultancy services were mainly provided by the developed countries, particularly the United States and the countries of Europe. Currently, even though the various countries had acquired experience at both the public and private levels, certain aspects still remained which, on account of their specific nature and/or complexity required assistance from abroad. It was, nevertheless,

considered convenient to examine the "installed capacity", of consultancy services in Latin America, before having recourse to participation from outside the region. This approach was determined by the fact that the countries of the region shared many common elements and the same idiosyncracies and had a better knowledge of their environment.

96. In that connection, the environmental consultancy firms should promote mechanisms for mutual co-operation and support associations which facilitated the exchange of information. Moreover, it was considered advisable for the consultancy firms to participate in that exchange of information and to avail themselves of the services of those international organizations such as UNEP, which had valuable data banks in the field of environmental management. The prospects for international co-operation among the countries of Latin America themselves had been rendered difficult by the requirements of the international financing agencies and the lines of credit offered, which conditioned the contracting of consultancy services and the acquisition of technological inputs from countries outside the region.

97. In order to guarantee the quality of the results of the EIA, and in particular of the studies undertaken through consultancy firms, it was considered useful to draw attention to the following points:

a) Suitable terms of reference should be drawn up.

b) In the process of contracting, priority should be given to technical considerations and a secondary role to those aspects of the negotiation aimed at determining the costs of the assessment.

c) Effective follow-up and control should be undertaken, both by the contracting agency and by the environmental authorities responsible for evaluating the study. That objective could be achieved if there was effective participation by supervisors in the study.

d) It was usually convenient to provide the consultant with all the basic information that was available on the project, and the resources to ensure that the study focused efficiently on the impact assessment and on the recommendation of preventive and palliative measures.

e) As far as possible, the studies commissioned should provide for previous stages of discussion and analysis which would serve as filters for defining the subsequent stages of the studies.

98. The conclusion was reached that the role of consultancy services in the field of the environment was essential and useful for meeting the needs and assisting in specific areas in which the State was weak, thus contributing to the viability and implementation of increasingly rigorous and restrictive environmental legislation in our countries. Moreover, consultancy services had had a favourable effect on the consolidation of standards and the accumulation of technical experience in environmental matters, and had at times helped the official agencies themselves to clarify their ideas and opinions on the objectives and goals to achieve and the manner of achieving them.

99. In order for that to happen, however, the State should establish proper guidelines and legislation governing its activities, clearly defining the rules of the game both in terms of the commissioning as well as the conduct and quality of the studies. At the same time, and within that framework, more than limiting themselves to receiving passively guidelines from the State, consultancy firms should play an active and dynamic role, interacting with and providing feedback on the actions of the State, as well as working towards changes of direction where necessary.

Group 3: Training needs for undertaking EIAs

100. Training in the field of the environment should be approached through a wide range of educational institutions, beginning with the basic formal levels of education up to the level of postgraduate university training. It was important to create an awareness of the environment in all sectors using means to disseminate information other than through the formal education system. With regard specifically to the question of training in environmental impact assessments, it was concluded that:

a) There was not enough trained personnel to undertake environmental impact assessments or to interpret and provide guidelines for those studies, nor were there professionals with sufficient experience to train the necessary human resources.

b) The specific areas to which priority should be given in a training programme on EIAs were the following: engineering, economics, informatics, law and health; useful information already existed on a number of those fields.

c) As the seminar had demonstrated, the region had had many experiences in assessing the environmental impact of various kinds of projects, which constituted a very useful tool for any training programme.

d) Training in the carrying out of environmental impact assessments could not be based on rigid and homogeneous education programmes since each assessment could vary in its methodology or comprehensiveness, depending on each case.

101. It was necessary to create or strengthen postgraduate educational programmes for professionals from any discipline that was related to EIAs, by strengthening them in the following six basic areas, in which they might be weak on account of their particular field of professional interest: physical geography, basic chemistry and physics, economics, demography, methods of assessment of the environment's sensitivity, and planning (land use planning). An attempt will thus be made to satisfy the demand for professionals in that area, which would help to overcome the shortages of more senior technical personnel and teaching personnel.

102. National training programmes should be established for officials working in the field of the environment, which take due account of the municipal, regional, sectoral and national levels. Such programmes should be carried out through short courses. Both with regard to postgraduate courses and to

shorter courses, emphasis was placed on the need to conduct workshops based on the specific experiences of the region.

103. It was necessary to promote horizontal co-operation in the field of training in view of the different levels of development in that area among the countries. It was also recommended that those efforts should be channeled through existing international and regional bodies such as ECLAC, PAHO, UNDP, IDB, ILPES, the World Bank, and CABEI. The suggestion was also made that a data bank on EIAs should be established which included at least the following:

a) A bibliography on techniques for the assessment of environmental impact;

b) A description of particular cases on the subject of EIAs, which occurred in the region and an account of the corresponding follow-up activities;

c) A list of experts in the region involved in the preparation of environmental impact assessment.

104. Finally, it was important to evaluate and compile the experience on the training and educational activities conducted in the past, in which there was active participation by, among other organizations, ECLAC, ILPES, the Inter-American Centre for Land and Water Resource Development (CIDIAT) and the former International Training Centre in the Environmental Sciences (CIFCA).

Group 4: Community participation in EIAs

105. Community participation required that there be modalities for access to the authorities who make the decisions regarding EIAs. This requires the incorporation of the community, organized at its various levels and areas, both in the forums in which actions and measures designed to manage the environment are discussed and those in which decisions are taken. At the same time, it was necessary to explore mechanisms of co-operation to enable the community to contribute its own human, physical, financial and technological resources to the processes of study, analysis and conclusions of the EIAs. That meant that their efforts, however limited, signified a greater degree of commitment, since paternalism and State action alone did not guarantee, in themselves, that the proposed objectives would be achieved.

106. Community participation was vital to the ongoing process of building democracy. Dictatorship and community participation were two opposing concepts and thus mutually exclusive. For that reason, it should be clearly established that the community participation to which we aspired, should be a fundamental element in the strengthening of the democratic process in each country. It should signify the expression of each and every member of a nation; it should permit the channelling of the aspirations of groups, associations, committees, co-operatives, etc., which reflected the opinions of their members; it should serve as an element that promoted awareness of

the integration of each member into the national and local society. All of that implied the establishment of a new social order.

107. Efforts to incorporate instruments in the management of the environment had been centered mainly on large development projects. The main consequence of that had generally been conflicts between the influence which each major project exercised on the national community and its repercussions on the local communities. Note was usually taken of the fact that while there were national and international benefits, it was the local communities that bore a set of social costs, many of them intangible and difficult to measure.

108. Environmental management should be aimed primarily towards national, regional and local planning, in which all the socio-environmentalist elements (physical/chemical, biological, natural and socioeconomic) should be taken into consideration. In that regard, it should be pointed out that since environmental management was the means of achieving development that was compatible with the protection of the environment, it was necessary to make efficient use of those instruments that made it possible to reorient land use plans. While environmental impact assessments constituted one of the key instruments, they did not in themselves represent a decision. Nevertheless, they provided elements useful in arriving at decisions on projects. Moreover, if their proper value was attributed to them, EIAs should constitute one of the key elements in promoting co-ordination among the different actors that participated in the process. In that connection, special attention should be paid to community participation, and that could only be achieved if clear guidelines were established. Such regulations would not necessarily limit or restrict participation by the community.

109. In that process, environmental motivation (environmental culture), understood as the integration into local, regional or national development of the different strata of the community, should constitute one of the fundamental pillars of EIAs. That made it possible to achieve positive results, since it included the stage of consultation of the community, which guaranteed that basic information, which was useful for the project would be obtained and there would be greater awareness within the community about the proposed activities.

110. Recognition should be given to the important role of the community in environmental impact assessments, in view of the familiarity of the community with its environment and the traditional knowledge of the region and its resources. Moreover, their contribution was vital during the process of preparation of the EIA. The community could identify at an early stage the adverse effects on those socio-cultural variables that were related to the quality of life, which were usually difficult to measure using formal yard sticks, such as the symbolic value of the earth or the increase in collective stress. The quality of life in relation to the environment might be determined by the sum of the physical conditions in the environment which were necessary for an optimum level of well being to be achieved in accordance with the cultural values that were particular to a given community.

111. The less the degree of integration of the communities (isolated indigenous or rural) was into the national society, the effects of development projects on the socioeconomic cultural framework would be more significant. In the same way, the greater the scale of the projects, the more limited would be the possibilities that the opinion of local communities would be taken into account in the process of decision-making regarding the implementation of such projects.

112. On the basis of empirical knowledge and the first hand experiences which communities had of their environment, the development of a greater sensitivity to environmentalist issues should be promoted using the organizational structure that existed in each locality and in accordance with the ethnic and cultural values of that area, in order to ensure a significant presence of such communities during all stages of environmental management, and to be able in that way to rise to the regional challenge to ensure an adequate quality of life, by promoting harmonious development on the basis of the rational exploitation of resources.

Notes

1/ See Central American Bank for Economic Integration, "Sistema de planificación y análisis ambiental (SPAA). Manual de procedimientos operativos" (DOC.18/89).

2/ See Norka Rojas and Delfina Rodríguez, "Las evaluaciones de impacto ambiental como instrumento de gestión ambiental en Venezuela" (DOC.01/89).

3/ See Pedro Misle, "Estudio de impacto ambiental de la planta de pulpa y papel Orinoco" (DOC.02/89).

4/ See Arístides Romero, "Estudio sobre los impactos ambientales: casos Pijiguaos y carborundum" (DOC.03/89).

5/ See Britta Kellermann, "Bases legales-administrativas para la implementación de la evaluación del impacto ambiental" (DOC.09/89).

6/ See Arnim Bechmann and Andreas Preising, "Esquema de análisis y casos ejemplares de la evaluación de impacto ambiental" (DOC.10/89).

7/ See Hipólito Pérez, "El procedimiento de evaluación de impacto ambiental en México" (DOC.06/89).

8/ See Ramón Alvarez, Roberto Durán and Carmen González, "Evaluación del impacto causado por las actividades de Petróleos Mexicanos sobre el recurso almejero de Laguna Pom, Campeche, México" (DOC.11/89).

9/ See Carlos Lancheros, "Estudio de caso: Complejo carbonífero Cerrejón Norte" (DOC.08/89).

10/ See Hernando Heilbron, "Complejo carbonífero 'El Cerrejón - Zona Norte'" (DOC.15/89).

11/ See Luis Miguel Isaza, "Estudio de impacto ambiental del proyecto carbonífero de El Cerrejón --Zona Norte-- en la Guajira" (DOC.12/89).

12/ See Roberto Barliza, "Corpoguajira: una acción institucional generada por la explotación minera en una región fronteriza de Colombia" (DOC.12/89).

13/ See Wilder Guerra, "Las comunidades indígenas de la Guajira frente al proyecto carbonífero de El Cerrejón" (DOC.14/89).

14/ See Mabel Tamborenea, "El Estado y la temática ambiental. Orientaciones y resultados de la política nacional en la materia" (DOC.17/89).

15/ See Tomás Gutiérrez, "Obras hidráulicas con aprovechamiento energético. La ingeniería de proyecto y el plan de gestión ambiental. Estudio de Caso. Metodología aplicada al aprovechamiento Paraná Medio" (DOC.16/89).

16/ See Maura B. Kufner and Eduardo A. Fabre, "Estudio ambiental de las actividades energéticas y mineras de la provincia de Mendoza" (DOC.07/89).