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REPORT OF THE REGIONAL SEMINAR ON
POLICIES FOR URBAN AND INDUSTRIAL WASTE MANAGEMENT

(Santiago, Chile, 1-3 July 1991)

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Introduction

1. This report contains basic background information and the conclusions and recommendations of the Regional Seminar on Policies for Urban and Industrial Waste Management.
2. The Seminar was organized by the Economic Commission for Latin America and the Caribbean (ECLAC), through the Joint ECLAC/UNEP Development and Environment Unit of the Environment and Human Settlements Division.
3. It was held as part of the project entitled Guidelines and Consultancy Services on Controlled Environmentally Sound Waste Management, which is being implemented by the Joint ECLAC/UNEP Development and Environment Unit in cooperation with the German Agency for Technical Cooperation (Deutsche Gesellschaft für Technische Zusammenarbeit) (GTZ).

I. BACKGROUND AND OBJECTIVES

4. During the second half of 1990, ECLAC, with the support of the German Agency for Technical Cooperation (GTZ) began to execute the project entitled "Guidelines and Consultancy Services on Controlled Environmentally Sound Waste Management". Five countries (Argentina, Brazil, Chile, Costa Rica and Ecuador) representing a broad range of the situations found in the region are participating in the first phase of the project which in some of them is being carried out at local government (municipality) level and in others at the level of the national government.
5. The main objective of the project is to motivate and help the governments of the region at both national and local level, to formulate and put into practice policies for controlling and monitoring urban and industrial pollution.
6. The objectives of the Seminar and the measures adopted to ensure their fulfilment were as follows:
 - a) To acquire more precise knowledge concerning the experience of Germany and the developed countries in general regarding the problem of urban and industrial waste and their solutions to it. With this in mind, GTZ sent a group of high-level experts from Germany and the United Kingdom to the meeting. A representative of the World Bank also attended in order to report on the Bank's approach to environmental issues.
 - b) To consider case studies carried out in the region, especially in the framework of the project, on methods used to solve problems relating to urban and industrial waste.
 - c) To hear the views of the international agencies participating in the Seminar concerning present policies and situations as regards urban and industrial waste management in different countries. For this purpose, representatives were sent by the World Bank, the Organization of American States, the United Nations Environment Programme and the Pan American Center for Sanitary Engineering and Environmental Sciences of the Pan American Health Organization.

d) To gain a clearer understanding of the level of public awareness of environmental problems in the region, and to demonstrate the extent to which awareness has resulted in sound and effective policies. The case studies proved very useful in this connection.

e) To provide representatives of government and business present at the meeting with more information about the problem of urban and industrial waste and the policies and measures needed to solve it.

f) To draw attention to activities which should be undertaken to give impetus to the Governments of the region, both national and local, and help them to formulate and execute policies to control and monitor urban and industrial pollution.

II. ORGANIZATION OF WORK

Place and date

7. The Regional Seminar on Policies for Urban and Industrial Waste Management was held at ECLAC headquarters in Santiago, Chile, from 1 to 3 July 1991.

Attendance *

8. Participants in the Seminar included 121 experts from Argentina, Brazil, Chile, Costa Rica, Ecuador, Germany, and the United Kingdom and representatives of the World Bank; the Organization of American States (OAS); the United Nations Environment Programme (UNEP); the German Agency for Technical Cooperation (GTZ); the Municipality of Campinas, Brazil; the Ministry of National Planning and Political Economy (MIDEPLAN) of Costa Rica, the Brazilian Cooperation Agency; the Municipality of Limeira, Brazil; the Municipality of the City of Buenos Aires; the Municipality of Quito; the Municipality of Santiago, Chile; the Pan American Center for Sanitary Engineering and Environmental Sciences of the Pan American Health Organization (PAHO); the Environmental Sanitation Technologies Company (CETESB) (Brazil); the Latin American Centre for Environmental Studies (CLEA) (Argentina) and the Claudio Gay Foundation, the Manufacturers Association (SOFOFA) and the Centre for Copper and Mining Studies (CESCO) —all from Chile— and other national government bodies of countries of the region.

Opening and closing meetings

9. During the opening session, Mr. Luis Alvarado, Minister of Public Property of Chile, highlighted ECLAC's ceaseless efforts to solve environmental problems and the valuable support provided by GTZ to Chile and the region in this area. Mr. Gert Rosenthal, the Executive Secretary of ECLAC, welcomed the participants, underlining the importance of environment for Latin America and the Caribbean. Mr. Adolf Ederer, the Commercial Attaché of the Embassy of Germany in Chile, emphasized the close cooperation between ECLAC

* See list of participants in annex 1 to this document.

and his Government in carrying out research on the environment, and drew attention to his Government's support of developing countries in helping them to find their own environmental strategies and solutions to environmental problems. Mr. Klaus Kresse, GTZ's Regional Sectoral Coordinator for Latin America and the Caribbean, mentioned the importance GTZ attached to environmental problems in the region; and the Director of the ECLAC Environment and Human Settlements Division, noted that the Seminar fell within the framework of the preparations being made by the countries of the region in connection with the forthcoming United Nations Conference on Environment and Development to be held in Brazil in 1992.

10. The meeting closed on 3 July. At the closing ceremony, Mr. Hernán Durán de la Fuente, the project's main expert and a member of the ECLAC Environment and Human Settlements Division, read out the conclusions and recommendations of the Seminar. The Director of the Division thanked those in attendance for their participation and stressed the value of the work of the Seminar as a contribution to the preparation of the forthcoming United Nations Conference on Environment and Development. The Director of the ECLAC Division of Operations officially closed the Seminar, expressing his gratitude to the participants and his appreciation for the work done.

Coordination

11. Discussions during the Seminar were coordinated by the project's main expert and by the Coordinator of the Joint ECLAC/UNEP Development and Environment Unit.

Organization of the Seminar

12. The Seminar was held in plenary meetings in which the expositions and substantive agenda items were introduced and discussed, interspersed with presentations of case studies. The items were treated in the following order: development and environment; juridical and institutional aspects of environmental policies; case studies of Brazil and Ecuador, environmental impact, case study of Chile, instruments for pollution control, the case of Costa Rica, technological policies for controlling pollution, case study of Argentina and, finally, financing of environmental programmes. On the afternoon of the last day, the conclusions and recommendations were read out and the floor was opened for observations and comments.

Agenda *

13. The Seminar treated the following items:

1. Development and environment
 - Sustainable development: Changing production patterns, social equity and environment
 - Economic policy and environment
2. Juridical and institutional aspects of environmental policies
3. Environmental impact
4. Instruments for pollution control
5. Technological policies for controlling pollution
6. Application of environmentally sound technologies
7. Micro-economic questions and financing of environmental programmes
8. Case studies:
 - Argentina
 - Brazil
 - Chile
 - Costa Rica
 - Ecuador
9. Conclusions and recommendations.

* See list of documents in annex 2.

III. CONCLUSIONS AND RECOMMENDATIONS

Development policies and environment

14. Strategies for economic and social development should include the environmental dimension. Development should be sustainable, and the environmental impact of investment projects should be duly evaluated.

15. The changes in production patterns necessary for sustainable development provide an opportunity for introducing environmental policies.

16. A number of environmental problems have been inherited from a past in which they were not given the attention they deserved, largely because of laissez-faire policies inspired by extreme liberalism.

17. State and community authorities should be assigned a more important role in regulating the activities of enterprises and the citizenry in order to ensure that environmental objectives are achieved.

18. Greater political will is needed if environmental problems are to be solved more effectively, and in order to strengthen political will, the level of awareness and participation of the citizenry must be raised.

19. There is a great shortage of resources for dealing with environmental problems, which are increasing because of the consequences of industrialization and metropolitanization.

20. The large external debt and the structural adjustments imposed constitute an added hindrance in confronting the environmental situation since they usually give rise to pressures that lead to predatory management of natural resources.

21. Needs should be classified by order of priority, and critical environmental areas should be identified.

22. A basic environmental policy should be drafted.

23. Policies and norms must have a clear and long-term thrust if they are to serve as a stable reference point for public and private enterprises and, in general, for all potential causes of pollution.

24. Environmental policies should be formulated on the basis of the principle that those who cause pollution are responsible for it; i.e., "the polluter pays".

25. Environmental policies must be formulated on the basis of consensus.

26. The private sector should participate in the consensus on environmental policies and in the solutions proposed therein.

27. Non-governmental organizations (NGOs) have an important role to play as conscience-raisers and in persuading the public to put pressure on public authorities to formulate sound environmental policies.

28. Public activities responsible for the solution of environmental problems must be transparent and remain in constant communication.

29. Scientific and technological development related to environment should be included in overall policies for the protection of the environment.

30. Environmental education and training should be included among the global objectives of a national environment policy.

Legislation and institutions

31. Present environmental legislation in Latin America and the Caribbean is generally unfocused, obsolete and inadequate.

32. In the field of environment, there are many highly diversified public institutions whose functions frequently overlap.

33. Large cities lack adequate mechanisms for ensuring coordination among their various municipalities, and this makes it difficult to solve environmental problems common to them all.

34. There is need for basic legislation on environmental issues, consisting in a body of coherent and comprehensive laws which would serve as a long-term frame of reference and as a regulatory device for economic agents responsible for pollution.

35. The legislative and institutional experience of the developed countries, which are farther ahead in these matters, should be used as a frame of reference.

36. The norms and standards needed in order to apply environmental law should be established.

37. To the extent possible, those norms and standards should be agreed to by the main polluters, who should be prevailed upon to commit themselves to a programme for attaining optimum goals within a reasonable time-frame.

38. Procedures and institutions for controlling and monitoring established environmental norms need to be defined; these institutions should differ from those which formulate policy.

39. There is need for coordination and cooperation among different agencies and local authorities so that problems which exceed the competence of each of them can be tackled.

40. Individual rights and especially the right to live in an unpolluted atmosphere, should be strengthened in the countries of the region.

41. In this regard, the participation of interested parties in public hearings on environmental problems should be encouraged; freedom of access to information, files and public records related to pollution should be granted, and, in general, public participation in the solution of environmental problems should be increased.

42. Ecological quality norms should to be defined with a view to ensuring that the packaging, labelling and general presentation of products indicate the ecological conditions in which they are produced, shipped, distributed, consumed and the way in which the waste they generate is disposed of.

43. Products which meet ecological norms should be identified and described as a guide to the consumer and in order to promote their use.

Environmental impact

44. The health of human beings and of ecosystems has experienced serious deterioration as a result of urban and industrial pollution.

45. Little information exists —and what there is has not been disseminated very broadly— about the profound impact of pollution and its serious long-term effects on human health and ecosystems.

46. Scientific research on relations between human beings and their environment should be intensified, and the findings obtained should be disseminated more widely.

47. An environmental impact assessment should be required from all investment projects, public and private.

Pollution control instruments

48. Pollution control instruments are defined as means of changing the behaviour of agents responsible for pollution so that they comply with the established environmental quality norms and standards.

49. Generally speaking, national and/or local authorities in the developed countries have first applied direct regulatory instruments, such as different kinds of quality standards, permits and licenses, for the installation and operation of industries and other polluting activities, and norms for authorizing land and water use. Economic incentives were later added to these direct and punitive instruments.

50. Policy instruments for pollution control normally require efficient networks for monitoring environmental quality, and the authority must be empowered to ensure that the norms and standards established are respected.

51. It is recommended that the whole gamut of policy instruments for pollution control be brought into play in an attempt to find the most suitable combination for each situation.

52. Economic instruments cannot replace traditional regulatory instruments, even if the former can be effectively monitored and enforced. They can, however, be recommended for increasing the flexibility, efficiency and cost-effectiveness of pollution control measures.

53. Economic instruments are desirable in that they promote the use of cost-effective means of bringing pollution down to acceptable levels, stimulate the development of technologies and experimentation at the private level in the field of pollution control, provide governments with the resources they need to finance pollution-control programmes, make regulatory technology more flexible and eliminate the need for governments to possess a large amount of highly detailed information in order to determine the most suitable level of control for each plant and product.

54. In theory, economic instruments can regulate pollution in accord with market mechanisms, thus facilitating deregulation and reduced government involvement. In practice, however, they do not eliminate the need for standards, environmental monitoring, enforcement mechanisms and other forms of government intervention. Operating on their own, they have not substantially improved the quality of the environment, first because they are difficult to put

into practice, and second, because in cases where recourse is had to them, they are applied only partially.

55. Those responsible for institutions engaged in the implementation of pollution-control and waste-management policies should have clearly defined functions and suitable experience and should be provided with the staff, equipment and financing they need in order to ensure compliance with regulation.

56. The main challenge in designing new environmental programmes will be to determine the most appropriate combination of environmental regulatory instruments, taking into account such factors as the need for greater economic efficiency and compatibility with operative administrative, law-enforcement and judicial structures; prevailing economic conditions and tax structure; the political correctness of the instruments envisaged; complications relating to their application; the facilities required for monitoring them and ensuring compliance with them and their consistency with overall environmental policy and with relevant internationally accepted principles.

57. Of all the different economic instruments, the pollution tax seems to be the one with the greatest potential for helping achieve pollution control and sound waste management in developing countries provided that it is effectively enforced.

58. Recommended economic instruments include the application of pollution taxes or charges; the establishment of tradeable emission rights and the granting of credits, subsidies and incentives for stimulating the recycling of waste, the use of safe technologies and compliance with the regulatory standards or norms imposed by the authorities.

Technological policies for pollution control

59. There is a close link between international competitiveness, changes in technological and production patterns and sustainable development. Industries that use more advanced technology are more likely to penetrate international markets. This kind of technology also minimizes the pollution caused by production processes and saves energy, thereby contributing to sustainable development.

60. The increase in the pressure exerted by the developed countries on the developing countries to persuade them to adopt processes which reduce the pollution resulting from the production of exports is causing them to change their technological and production patterns more rapidly. The problem is how to finance such change.

61. Safe technologies are usually the most profitable in the long term.

62. Generally speaking, technology which reduces pollution exists and is available; the problem lies in the cost-benefit analysis made by enterprises regarding its use, or in other words, in the priority given to this kind of investment.

63. Governments should support enterprises in their efforts to modernize their technology and change their production patterns, by designing and implementing policies and instruments that provide fiscal, tax, financial, credit and other incentives to reinforce the market mechanisms that give impetus to the changes required.

64. Governments should enter into bilateral and multilateral agreements to intensify international cooperation in the field of technology, especially in critical, priority areas which have already been identified.

65. Governments and private enterprises should promote international fairs and conventions where new technologies can become more widely known.

66. Governments and private enterprises should provide more resources to research and development institutions.

67. An effort should be made to increase staff training and to further the development of research laboratories in the region.

Financing environmental programmes

68. Both public and private sources of funding have to be taken into consideration for financing environmental programmes. An effort should also be made to see that established services and programmes become self-financing and generate profits regardless of whether they are financed and managed by the public or by the private sector.

69. When such programmes are financed out of private sources, costs should be assessed on the basis of the "polluter pays" principle. Users should also pay for the resources they use, and the amount they are charged should reflect the quantity and quality of the resources used.

70. The glaring institutional and financial weaknesses of regional and communal governments reduce their capacity to undertake environmental programmes. An effort should be made to strengthen their internal structures and the systems they use to collect taxes and municipal fees relating to industrial and commercial licenses, property taxes, motor-vehicle registration, municipal services, etc.).

71. Strengthening the municipalities institutionally and financially would make it possible to decentralize both decision-

making and environmental management at public level, would relieve the central government of some of its present obligations, would make the communal governments less dependent on the national budget and would increase their capacity to solve environmental problems.

72. Central governments need to provide repayable financial and credit assistance to local governments so that they can carry out the programmes and arrange the investments needed to solve environmental problems in urban areas.

73. Programmes should be financed out of a combination of user charges, profits and transfers from the central government, according to the situation of each city.

74. The private sector should be incorporated into the system for managing urban waste in order to increase the capacity of private programmes for efficiency, profitability and self-financing, relieve overburdened communal governments and provide the citizenry with efficient, economical services.

Annex 1

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Annex 2

DOCUMENTS SUBMITTED TO THE SEMINAR

- LC/R.981(Sem.61/3) Joint ECLAC/UNEP Development and Environment Division, "Marco global para la formulación de políticas para el control y fiscalización de la contaminación industrial y urbana en América Latina. Elementos para la discusión".
- LC/R.982(Sem.61/4) José Miguel Sánchez, "Aspectos económicos de la política de control y fiscalización de fuentes fijas. Elementos para la discusión. El caso de Chile".
- LC/R.983(Sem.61/5) Alejandro Steiner, "Principales emisiones de contaminantes atmosféricos y algunos medios para su control. Elementos para la discusión. El caso de Chile".
- LC/R.984(Sem.61/6) Rafael Valenzuela, "Aspectos jurídicos e institucionales de la política de control y fiscalización de fuentes fijas. Elementos para la discusión. El caso de Chile".
- LC/R.985(Sem.61/7) Jaime Solari, "Minuta conceptual del decreto supremo que «Reglamenta el funcionamiento de fuentes estacionarias con altas tasas de emisión de anhídrido sulfuroso y partículas totales en suspensión en todo el territorio de la República». Elementos para la discusión. El caso de Chile".
- LC/R.986(Sem.61/8) Fernando Menéndez, "El caso de Ciudad de México. Elementos para la discusión".

- LC/R.987(Sem.61/9) Marcelo Reyes, "Apuntes sobre contaminación atmosférica. Presentación de casos y datos de algunos países seleccionados. Elementos para la discusión. Experiencias internacionales".
- LC/R.988(Sem.61/10) Eduardo Klein, "Las leyes de descontaminación del aire en la República Federal de Alemania. Elementos para la discusión".
- LC/R.995(Sem.61/11) Fabián Sandoval, "Políticas para el control y la fiscalización de la contaminación urbana e industrial en el Ecuador".
- LC/R.996(Sem.61/12) Hermann A. Mülhauser, "Impacto ecológico de contaminantes atmosféricos".
- LC/R.1005(Sem.61/13) Rafael Valenzuela, "El principio «El que contamina, paga»".
- LC/R.1007(Sem.61/14) Ana Luz Durán, "Análisis comparativo entre dos métodos de cuantificación de la producción de desechos industriales para cuatro países: Argentina, Colombia, Chile y Ecuador".
- LC/R.1008(Sem.61/15) Michael Betts, "The practical interpretation and application of the polluter pays principle".
- LC/R.1009(Sem.61/16) Michael Betts, "Economic policy measures for the improvement and protection of the environment".
- LC/R.1010(Sem.61/17) Michael Betts, "Formal quality assurance systems as a basis for environmentally-sound management practices in the public and private sectors".
- LC/R.1012(Sem.61/18) Jorge Jurado, "Política municipal para el control de la contaminación ambiental".
- LC/R.1013(Sem.61/19) Georg Goosmann y Hans Sutter, "Concepts for the reduction of industrial wastes".
- LC/R.1014(Sem.61/20) Georg Goosmann, "Introduction to waste management".
- LC/R.1015(Sem.61/21) Georg Goosmann, "Case study information".

- LC/R.1018(Sem.61/22) Gerd Winter, "Public participation in environmental decision-making in a comparative perspective".
- LC/R.1019(Sem.61/23) Gerd Winter, "Overdevelopment and environmental law".
- LC/R.1025(Sem.61/24) Hernán Sandoval, "La contaminación del aire y sus efectos sobre la salud".
- LC/R.997 José Miguel Arteaga, "Background information for the formulation and implementation of a policy on the regulation and control of air pollution from fixed sources in the production and energy sectors".
- LC/L.608 Joint ECLAC/UNIDO Industry and Technology Division, "Tecnología, competitividad y sustentabilidad".