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E C L A C

Economic Commission for Latin America and the Caribbean

REPORT ON THE MEETING OF THE EXPERT GROUP RESPONSIBLE FOR STUDYING THE POSSIBLE EFFECTS OF CLIMATE CHANGE ON THE WATER RESOURCES OF LATIN AMERICA AND THE CARIBBEAN */

(Santiago, Chile, 23-25 November, 1993)

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CONTENTS

I. WORK PROGRAMME

Place and Date

1. As part of the follow-up activities on the recommendations of the Dublin Statement and the Report of the International Conference on Water and the Environment: Development Issues for the 21st Century and in Agenda 21 of the United Nations Conference on Environment and Development, a meeting was held in Chile, 23-25 November, 1993, of the Expert Group responsible for studying the possible effects of climate change on the water resources of Latin America and the Caribbean.

Attendance

2. Experts from various countries of the region participated in the meeting, as well as representatives of international and bilateral organizations (see the list of participants in Annex 1).

Election of Officers

3. Those elected were as follows:

President:	Carlos Serrentino (Uruguay)
Vice-president:	Myrna Araneda (Chile)
Rapporteur:	Fradique Chacón (Venezuela)

Agenda

4. The following agenda was approved at the meeting.

1. Election of Officers
2. Approval of the agenda
3. The effects of possible climate change on the management of water resources in Latin America and the Caribbean
4. National policy alternatives
5. Recommendations for regional action programmes
6. Other matters
7. Adoption of the report

Opening session

5. The meeting was inaugurated on behalf of ECLAC by Oscar Altimir, Director of the Economic Development Division, who pointed out the importance to the region of the challenge presented by possible climate change and its effects on water resources. He emphasized the importance to ECLAC of the sustainability over time in the changing production patterns taking place in the region.

II. SUMMARY OF THE DISCUSSIONS

The effects of possible climate change on the management of water resources in Latin America and the Caribbean (point 3 on the agenda)

6. This discussion began with the presentation by the experts of reports on measures taken to counter the effects of possible climate change on the countries of the region or on water resource projects. The following reports were presented.

a) Global climate change and its effect on water resources, world-wide and in Chile (Myrna Araneda);

b) The project for waste water treatment in the Valencia Lake basin (Fradique Chacón);

c) The conceptual basis of the concern about the possible effects of climate change on the water resources of Latin America and the Caribbean (Carlos Serrentino);

d) Preventative action against the potential impact of climate change on the water resources in Nicaragua (José Jesús Mairena); and

e) Climate variability in Argentina and its impact on society and on water resources. Speculations about possible climate change (Walter Vargas).

7. In the discussions of the individual reports it was recognized that the effects of potential climate change in the region were unique.

8. It was said that the effects of climate change could be either positive or negative in any given region. The studies of the Intergovernmental Panel on Climate Change (IPCC) on the potential effects of climate change were also evaluated. There is still some considerable scientific and political uncertainty in this area and it is, therefore, necessary to develop new policies and strategies to be able to respond quickly.

9. It was indicated that one of the problems is the lack of reliable and representative information for quantifying climate change in the region in general and specifically for designing projects related to natural resources. In some cases, this has resulted in works being either over or under designed. It was mentioned that information has been collected in the region, but not processed and that the Data Rescue Project (DARE) of the World Meteorological Organization (WMO) was meant for attempting to abstract data of this kind. Problems related to the design, execution and maintenance of the hydrometeorological networks were also mentioned.

10. It was considered necessary to develop local policies based on cooperation among the countries of the region for evaluating climate change and its effects on the water resources of Latin America and the Caribbean, instead of continuing to use European and North American estimates.

11. The conclusion was that climate change should not be treated only as a problem of the future, since the problem is important at the present time.

National policy alternatives (point 4 on the agenda)

12. On the basis of the reports presented and the discussions related to the possible nature of potential climate change and its effect on Latin America and the Caribbean, a series of recommendations for national action was made for presentation to the countries of the region.

13. Because of the close relationship between climate change and economic and social activities the following measures were proposed for the countries of the region:

a) To systematically develop and apply SUSTAINABLE NATIONAL POLICIES for reacting to the effects of climate change.

b) To improve the coordination of economic and social activities, since the management of water resources to meet the challenge of climate change depends largely on the structure of the state.

c) To support attempts to educate the general public in the correct use of water and the importance of its economic value, provide information and encourage public participation;

d) To make the teaching of the climate system, the changes which occur in it and its impact on society and the environment compulsory in primary and secondary schools.

e) To provide financial support to all systems for monitoring and diagnosing the elements of the hydrological and climate cycles and their impact on the various cultural systems.'

f) To establish suitable employment conditions in conformity with their responsibilities for the professional and administrative employees and the labour force at all levels of water resources management.

g) To foster research programmes directed to an improved understanding of the relationships between climate change and the intensity of droughts, floods and other extreme phenomena.

h) To develop, adopt and apply similar techniques and methodologies for joint evaluation of the possible effects of climate change on the water resources of the region.

i) To seek to develop methodologies for evaluating the social, economic and environmental consequences of climate change and preventing possible social conflict, assuring the due participation of the various public sectors.

j) To carry out the necessary scientific and technological research for optimizing and broadening the scope of those areas of regional agriculture which could be affected by climate change, so that they are better prepared to respond effectively.

k) To assure the adequate training of the necessary professional staff, of water administrators at all levels, including the extension service employees, so that they make the right decisions for meeting the challenge to social and economic order which is implicit in climate change.

Recommendations for Regional Action Programmes (point 5 on the agenda)

14. Given the physiographical characteristics of Latin America and the Caribbean, cooperation among the countries of the region is essential, with priority in the following areas:

a) To prepare a common policy stand in the present negotiations in the United Nations;

b) To generate uniform and very reliable and representative hydrometeorological, social and economic information for evaluating the impact of climate change on the region;

c) To develop programmes for cooperation on regional and international research projects on climate change, monitoring its occurrence and its impact on the hydrological regime and its consequences for the economies of Latin America and the Caribbean;

d) To centre the research on the large river basins, such as the Plata and the Amazon, in order to avoid the existing problems of lack of coordination;

e) To strengthen the international centres engaged in research on climate change and social and economic studies;

f) Promote training in water resources management at the international level, in order to improve the ability to react to the various consequences of climate change;

g) To assure due coordination among the various international organizations engaged in the study of climate change in Latin America and the Caribbean;

15. It is recommended that ECLAC assume the leadership for meeting the challenges posed in the region by climate change.

Other Matters (point 6 on the agenda)

16. ECLAC presented a proposed project for studying the effects of climate change on Latin America and the Caribbean. The project would have two basic objectives:

i) To construct a model for "predicting" climate change in Latin America and the Caribbean; and

ii) To propose development strategies for the various economic and social systems potentially affected by climate change.

17. The project would not be simply a hydrometeorological study, but a study for developing strategic policies combining hydrometeorological expertise with economic policy alternatives. The intention is to set up a multidisciplinary team in ECLAC for carrying out the project in cooperation with experts from the countries of the region. It is hoped that a preliminary project proposal will be ready in February/March 1994 in order to begin the search for financing in order to initiate the project in 1995. The final result of the project would be a set of regional and sub-regional proposals for government measures in the various sectors of the economy.

18. The proposal received very positive support. It was commented that the project posed a great challenge and that the idea, in itself, greatly supported efforts already made in the region to develop information and models related to the national economies. The urgency of the need to have the results of the project available was repeated, because of the rapid evolution of international agreements and policies on climate change.

Annex 1

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Annex 2

LIST OF DOCUMENTS

1. Climate Change and Water Management in Latin America and the Caribbean (LC/R.1274), ECLAC.

2. Protection of the quality and supply of freshwater resources: application of integrated approaches to the development, management and use of water resources (Agenda 21, The United Nations Conference on Environment and Development), ECLAC

3. Cambio climático: posibles consecuencias y algunas sugerencias para disminuir su efecto en México, Martín Mundo Molina y Polioptro Martínez, Instituto Mexicano de Tecnología del Agua.

4. The Dublin Statement and the Report on the International Conference on Water and the Environment: Development Issues for the 21st Century.

5. Cambio climático global y su incidencia en Chile, Office of Meteorology, Chile.

6. Posibles acciones ante los posibles impactos de los cambios climáticos en los recursos hídricos de Nicaragua, Nicaraguan Institute of Territorial Studies (INETER).

7. Proyecto sistemas de tratamiento de aguas residuales en la cuenca del lago Valencia, Fradique Chacón, Ministry of the Environment and Renewable Natural Resources, Venezuela (MARNR).

8. Antecedentes conceptuales para la consideración de los posibles efectos de los cambios climáticos en los recursos hídricos de América Latina y el Caribe, Carlos M. Serrentino, Director, National Meteorology Bureau, Uruguay.