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Inter-Secretariat Working Group on
Water Resources in Latin America

Second Session

Santiago, Chile, 16-17 August 1982

CO-ORDINATION OF WATER RESOURCE ACTIVITIES IN LATIN AMERICA

82-7-1333

CONTENTS

/I. Review

I. Review and co-ordination of field and regular programme activities

The basic purpose of the establishment of this Inter-Secretariat Working Group is to better co-ordinate the water resource activities of international organizations in Latin America. To achieve such co-ordination a sine qua non condition should be the exchange of information on current and planned field and regular programme activities, as an essential first step. One of the goals of the information system on the water resource activities of the international organizations is to achieve such an exchange. In itself, however, the information system is rather a passive instrument in the co-ordination process. The active instruments must be regular meetings. In consequence, the participants might wish to discuss how best to use the meetings to achieve that purpose.

To achieve a real and effective co-ordination, it is important to distinguish between regular programme activities and field or project activities given the different nature of the two sets of activities. In the case of field activities the required co-ordination is likely to involve immediate joint action among the different agencies and, therefore, continuous updating of information on projects which may be beyond the capacity of the proposed information system. The group may like to consider adopting a similar approach to that being followed at the global level by the ACC Inter-Secretariat Group for Water which has arranged to receive information from the UNDP every six months and is exploring the possibilities of receiving similar information on projects funded by other sources.

In contrast, information on regular programme activities can more easily be provided within the framework of the proposed information system, as the system can be adapted to the budgeting cycle of the United Nations system. The group may be interested in considering how this might be best achieved.

A preliminary partial listing of the activities of some international organizations is presented in annex 1. In part, this listing is based on information submitted to the ACC Inter-Secretariat Group on Water during 1981 but also includes information directed to CEPAL.

At the first meeting of the Inter-Secretariat Working Group on Water Resources in Latin America held in Montevideo, Uruguay, April 1981, CEPAL presented a draft report on a proposed information system on the activities of international organizations in the water resources field. In was agreed in the discussion that the draft would be reviewed in the light of the comments received and a revised version be presented to a meeting of the group in Santiago, Chile. This meeting would also decide upon the periodicity of any survey conducted in connexion with the information system.

Comments were received from the United Nations Department of International Economic and Social Affairs, United Nations Department of Technical Co-operation for Development, United Nations Children's Fund, United Nations Development Programme, United Nations Environment Programme, Food and Agricultural Organization, International Bank for Reconstruction and Development, World Meteorological Organization, the International Atomic Energy Agency, Pan-American Health Organization and the Inter-American Development Bank. In general the comments received were favourable to the initiative taken by CEPAL, and agreed on the importance of establishing a centralized and co-ordinated information system for the water resource activities of the international organizations in Latin America; but they thought the proposed format of the survey questionnaire was too complex.

/Accordingly, a

Accordingly, a revised and simplified version of the questionnaire has been prepared and is attached as annex 2. The objectives established for the information system remain, however, the same, namely, the provision of means to follow the activities of international organizations in the water resources field in the region and the co-ordination of these activities.

A version of the revised questionnaire was presented to the ACC Inter-Secretariat Group for Water at its Second Session in Geneva in October 1981. It was agreed that all requests for information should be co-ordinated between the various offices of the United Nations in order to minimize the burden on the organizations in responding to requests for data.

It is not only in respect of the collection of information that it is necessary to co-ordinate the activities in the region with those at the global level. A general passage of information is required if the efforts to better co-ordinate the activities of the international organizations at all levels, global, regional and country, are to be effective. A brief summary is provided, therefore, of the principal items discussed at the Second Session of the ACC Inter-Secretariat Group for Water held in Geneva, October 1981.

(a) Interdisciplinary missions: it was agreed that the regional commissions would play the leading role in organizing these missions at the request of governments following the letter sent by the Secretary-General and the Administrator of the UNDP to the resident representatives. The missions would be kept small, consist of experts already in the field and be undertaken at no or minimum cost to governments. Pilot missions would be undertaken in order to clarify the scope and nature of the missions. It was agreed, however, that in general the missions should not become involved in the formulation of specific projects but advise on issues of a broader nature.

(b) Assessment of water resources: WMO and UNESCO have prepared guidelines for the evaluation of water resources assessment programmes. The list of countries which have agreed to pilot studies includes Caribbean Islands, Jamaica, Panama and Uruguay.

(c) System-wide consolidated catalogue of publications: it was agreed that this planned catalogue, a preliminary of which was circulated, should be expanded to include a separate list of some non-sales publications. The text of the catalogue will be published in English, French and Spanish.

(d) Briefing note for resident co-ordinators, resident representatives, country representatives and project managers affiliated to individual organizations of the United Nations system: the note would contain information on the activities of the different organizations including the facilities and resources of the organizations for backstopping technical co-operation projects. A final draft would be prepared by DIESA, the World Bank and the chairman of the Group (WMO) by April 1982.

(e) Education and training: it was agreed that UNESCO, ILO and FAO should undertake an in-depth survey of the activities of the United Nations system in education and training in the field of water resource development, including a study of existing national, regional and sub-regional institutes.

/II. Arrangements

II. Arrangements for review of progress in the application of the Mar del Plata Action Plan

The Secretary-General has been requested to submit to the Committee of Natural Resources, in 1983, a report on progress made in the implementation of the entire Mar del Plata Action Plan, including the International Drinking Water Supply and Sanitation Decade. This report is to be based on existing material and no questionnaire will be sent to governments.

An outline of the proposed report has been circulated and inputs requested from all organizations by 30 June 1982. A draft of the proposed input from CEPAL on progress on the Action Plan in Latin America is attached as annex 3. It is anticipated that the final version of the report will be ready at the end of February 1983.

A further and more thorough review of progress in the Action Plan and the IDWSSD is required at the ninth session of the Committee of Natural Resources in 1985. Three reports will be prepared for this review:

(a) On progress in the IDWSSD;

(b) On progress in the Action Plan;

(c) On present and future activities of the United Nations system.

For this purpose, a questionnaire will be sent to governments. It has been proposed that these questionnaires should be tailored to the characteristics of each region. The regional commissions would be responsible for making the survey once the form of the questionnaire had been agreed upon. The first draft will be discussed at the next meeting of the ACC Inter-Secretariat Group on Water in October 1982.

Regional progress in the Action Plan will be reviewed at the Twentieth Session of CEPAL in 1984. For this purpose a document on Regional Progress in the Implementation of the Mar del Plata Action Plan will be prepared. An outline of the proposed contents of this document is attached as annex 4.

/Annex 1

Annex 1

A PRELIMINARY PARTIAL LISTING OF THE WATER RESOURCE RELATED ACTIVITIES OF SOME INTERNATIONAL ORGANIZATIONS IN LATIN AMERICA

Cuadro 1

SECTORES BENEFICIARIOS

Sistema parcial de información: campo específico de los organismos internacionales

Organismos internacionales		Agua potable y alcantarillado	Agricultura y/o ganadería	Generación energía eléctrica	Uso industrial V-A-2.4		Piscicultura y/o pesquería	Navegación	Recreación y medio ambiente	Sector de carácter conflictivo natural						Multisectorial	Otros
					Urbano	Rural				Control inundación	Zonas de sequía	Contaminación	Protección ambiental	Eutroficación	Otros		
Organos de las Naciones Unidas	PNUD																
	PNUMA																
	UNIFEC																
Organismos especializados de las Naciones Unidas	FAO																
	UNESCO																
	OMS																
	OIM																
	OPS/CEPIS																
	BIRF																
Organismos interguberna-mentales	OEA																
	BID																
	IICA																
	Otros																
Organismos gubernamentales y privados	AID																
	CIID																
	Fundación Ford																
	Otros																
Otros organismos	Universidades																
	Centros de investigación																
	Centros de capacitación																
	Otros																

Cuadro 2

PAISES DE OPERACION

Sistema parcial de información: Campo específico de los organismos internacionales

Organismos internacionales		Multinacional		Nacional																												
		A nivel de región	A nivel de subregión	Argentina	Bahamas	Barbados	Bolivia	Brasil	Canada	Colombia	Costa Rica	Cuba	Chile	Ecuador	El Salvador	Granada	Guatemala	Guyana	Haiti	Honduras	Jamaica	Mexico	Nicaragua	Panamá	Paraguay	Perú	Dominicana República	Suriname	Trinidad y Tobago	Uruguay	Venezuela	A nivel regional	A nivel local
Organos de las Naciones Unidas	PNUD																																
	PNUMA																																
	UNICEF																																
Organismos especializados de las Naciones Unidas	FAO																																
	UNESCO																																
	OMS																																
	OMM																																
	OPS/OMPIS																																
	BIRF																																
Organismos interguberna-mentales	CEA																																
	BID																																
	IICA																																
	Otros																																
Organismos gubernamentales y privados	AID																																
	CIID																																
	Ford																																
	Otros																																
Otros organismos	Universidades																																
	Centros de investigación																																
	Centros de capacitación																																
	Otros																																

Cuadro 3

CUENCAS DE OPERACION

Sistema parcial de información: Campo específico de los organismos internacionales

Organismos internacionales		Cuencas mayores																												Nacional		
		Pacífico Sur	Patagonia	Sist. Central de Chile	Pampa argentina	Endorreico Argentina	Plata	Titicaca	Amazónica	Tocantins	Sn. Francisco	Atlántico Sur	Noreste Brasil	Pacífico seco	Orinoco	Guyanas	Venezuela Central	Maracaibo	Pacífico tropical	Caribe	Yucatán	Pacífico Norte	Endorreico Sur	Río Bravo	California	Endorreico Norte	Río Colorado	Islas Caribe	Golfo México			A nivel de sistemas de cuencas	A nivel de una cuenca o por cuencas	A nivel de una sub-cuenca, o por sub-cuencas
Programas de las Naciones Unidas	PNUD			( )	(5)		(5)	(5)			(5)																							
	PNUMA																																	
	UNICEF																																	
Organismos especializados de las Naciones Unidas	FAO																																	
	UNESCO																																	
	OMS																																	
	OMM																																	
	OPS/CEPIS																																	
	BID																																	
Organismos internacionales de financiamiento	OEA																																	
	BID																																	
	IICA																																	
	Otros																																	
Organismos gubernamentales y privados	AID																																	
	CIID																																	
	[illegible]																																	
	Otros																																	
Centros universitarios	Universidades																																	
	Centros de investigación																																	
	Centros de capacitación																																	
	Otros																																	

Cuadro 4

ACTIVIDADES TECNICAS APOYADAS

Sistema parcial de información: campo específico de los organismos internacionales

Organismos internacionales		Evaluación de Recursos Hídricos		Formulación y ejecución de proyectos				Operación y mantenimiento		Manejo y conservación		Actividades técnicas integradas e integrables	
		Inventario y estudios	Evaluación y diagnóstico	Identificación y priorización de proyectos	Estudios de proyectos	Construcción de obras	Equipamiento de proyectos	Organización para la distribución	Operación y mantenimiento de infraestructura	Ordenamiento y manejo	Protección y recuperación	Comprende la totalidad de las actividades	Comprende parte de las actividades
Organos de las Naciones Unidas	PNUD												
	PNUMA												
	UNICEF												
Organismos especializados de las Naciones Unidas	FAO												
	UNESCO												
	OMS												
	OMM												
	OPS/OEPIS												
	BIRF												
Organismos interguberna-mentales	OEA												
	BID												
	IICA												
	Otros												
Organismos gubernamentales y privados	AID												
	CIID												
	Fundaciones												
	Otros												
Otros organismos	Universidades												
	Centros de investigación												
	Centros de capacitación												
	Otros												

Cuadro 5

ACTIVIDADES GERENCIALES APOYADAS

Sistema parcial de información: Campo específico de los organismos internacionales

Organismos internacionales		Dirección política y legislación				Planificación de recursos hídricos				Aspectos financieros					Desarrollo de tecnologías, investigación aplicada y extensión						Asistencia técnica, capacitación y entrenamiento			Supervisión, seguimiento, control y evaluación			Sistemas de información, difusión y comunicación			Apoyo acciones de cooperación horizontal			Act. gerenciales integradas		Act. complementarias y otras	
		Organización institucional y racionalización	Racionalización administrativa	Políticas generales y específicas	Leyes y reglamentos y otros dispositivos legales	Formulación y evaluación de planes y programas	Estadísticas generales y específicas	Análisis y formulación de políticas	Gestión de proyectos específicos	Para estudios globales planes y programas	Para estudios y/o proyectos específicos	Para determinada actividad técnica	Para determinada actividad gerencial	Para actividades técnicas y/o gerenciales integrales	Adopción e implementación de nuevas tecnologías	Mejoramiento de tecnologías ya utilizadas	Servicios técnicos especializados	Investigaciones aplicadas	Experimentación	Extensión	Formulación de programas de asistencia técnica y capacit.	Asistencia técnica propiamente dicha	Capacitación	Seguimiento y/o supervisión	Control y fiscalización	Evaluación técnica	Desarrollo de sistemas de difus., infor. y/o comunic.	Aplicac. sist. informac., difusión y/o comunicación	Intercambio de información	En determinada actividad técnica	En determinada actividad gerencial	En actividad técnica y/o gerencial integradas	Que comprenden la totalidad de las actividades	Que comprenden parte de las actividades	Organización de eventos y otros	Apoyo u otorgamiento otros servicios
Organos de las Naciones Unidas	PNUD																																			
	PNUMA																																			
	UNICEF																																			
Organismos especializados de las Naciones Unidas	FAO																																			
	UNESCO																																			
	OMS																																			
	OMM																																			
	OPS/OEPTS																																			
	BIRF																																			
Organismos intergubernamentales	OEA																																			
	BID																																			
	IICA																																			
	Otros																																			
Organismos gubernamentales y privados	AID																																			
	CIID																																			
	Otros																																			
Otros organismos	Universidades																																			
	Centros de investigación																																			
	Centros de capacitación																																			
	Otros																																			

Annex 2

QUESTIONNAIRE ON ACTIVITIES OF INTERNATIONAL AGENCIES
IN THE WATER RESOURCES FIELD IN LATIN AMERICA

I. General

1. Name of organization
2. Name and title of officer completing this form
3. Personnel participating in activities in the water resources field (number of staff or man/years available)
   - 3.1 At headquarters: - permanent
     - fixed-term
     - consultants
   - 3.2 In the field: (Regional advisers, experts, etc.): - permanent
     - fixed-term
     - consultants
4. Approximate annual budget for activities in the field of water resources (average 1980-1981; 1982-1983)
   - 4.1 Regular budget
   - 4.2 Extrabudgetary resources
5. Sectors in which the organization works (see annex A)
   - 5.1 Sectoral activities: drinking water supply and sanitation, agriculture, energy, etc.
   - 5.2 Multisectoral activities: evaluation of water resources, planning, etc.

II. Projects

Brief description of the projects under the present programme, in accordance with the following categories:

A. Regional-level projects (for the whole of Latin America)
B. Subregional-level projects (two or more countries)
C. National-level projects (one country)

1. Name of project
2. Objective of project
3. Date of initiation and estimated termination date of activity or project
4. Approximate project budget (regular budget and/or extrabudgetary resources)
5. Other international or national organizations participating in the project, if any.
6. Sector or sectors benefitted by the activity or project (see annex A)
7. Major basin or system of major basins to which the project belongs (see annex B)
8. Forms of operation for execution of project (see annex C)
9. Orientation of project:
   - 9.1 Technical orientation: if appropriate, state the technical orientation of the activity or project (see annex D)
   - 9.2 Management orientation: if appropriate, state the management orientation or orientations of the activity or project (see annex E)

/10. Recipient

10. Recipient of work or result of project. State who is going to use or benefit from the results of the project and how this information is going to be provided to them (publication, courses, reports, etc.) (see annex F)
11. Future of the activity or project. If appropriate, state what plans there are for following up the activities carried out, or what it is hoped to do in the future as a continuation of the project.

/Annex A

Annex A

SECTORS

1. Housing and population

   (a) Urban drinking water supply and sanitation
   (b) Rural drinking water supply and sanitation

2. Agriculture, stock-raising and forestry

   (a) Irrigation of arid and semi-arid land
   (b) Improvement of water retention in non-irrigated land
   (c) Land drainage and recovery
   (d) Management of hydrographic basins

3. Energy

   (a) Generation of hydroelectric power in large and medium-sized power stations
   (b) Generation of hydroelectric power in mini and micro-stations

4. Industry

5. Mining

6. Fisheries and/or pisciculture or aquiculture

7. Navigation

8. Recreation and wildlife

9. Natural resources in general (evaluation of water resources with a view to multisectoral use)

10. Environment (environmental management)

    (a) Conservation of the environment
    (b) Control of contamination, etc.

11. Protection from and control of prejudicial natural phenomena

    (a) Flood control
    (b) Drought control
    (c) Control of landslides and erosion
    (d) Control of other problems

    Also, indirectly:

12. Economic and financial sector

    (a) National planning and regional development
    (b) Educational sector (colleges, universities or specialized institutes)

13. Other (specify)

Note: Indicate if the project is sectoral or multisectoral.

/Annex B

Annex B

MAJOR HYDROGRAPHIC BASINS OF THE REGION

1. South Pacific
2. Patagonia
3. Central Chile
4. Pampas of Argentina
5. Endorheic system of Argentina
6. River Plate
7. Titicaca
8. Amazon
9. Tocantins
10. São Francisco
11. South Atlantic
12. Northeast of Brazil
13. Pacific drylands
14. Orinoco
15. Guayas
16. Central Venezuela
17. Maracaibo
18. Tropical Pacific
19. Caribbean
20. Yucatán
21. North Pacific
22. Southern Interior system, Mexico
23. Rio Bravo
24. California
25. Northern Interior system, Mexico
26. Rio Colorado
27. Caribbean Islands
28. Gulf of Mexico
29. Upper basins

/Annex C

Annex C

MOST FREQUENT FORMS OF OPERATION

1. Execution of studies (or projects) at the headquarters level (monographs, articles, etc.)
2. Execution of studies (or projects) in the field (projects, appraisals, etc.)
3. Promotion of meetings of water resource experts or meetings of an intergovernmental nature
4. Dispatch of short-term technical assistance missions
5. Selection and hiring of long-term consultants
6. Preparation of manuals and other elements for disseminating working methodologies
7. Preparation and delivery of training courses
8. Appraisal and reimbursable or non-reimbursable financing of investment projects
9. Compilation and systematic dissemination of water resources information
10. Execution of research in the field (pilot areas, laboratory, etc.)
11. Promotion of horizontal co-operation among governments and specialized institutions and agencies
12. Permanent, periodic or ad hoc follow-up and control of activities in order to advise or inform governments
13. Others (specify)

/Annex D

Annex D

ACTIVITIES OR PROJECTS WITH A TECHNICAL ORIENTATION

1. Inventories, studies, appraisals or diagnoses of surface or underground water resources
2. Formulation and appraisal of investment projects (at the pre-feasibility, feasibility or final levels)
3. Structures and techniques for tapping, regulating, transporting, treating and draining water in different conditions, levels and sectors
4. Operation and maintenance of water systems and systems for the control of natural phenomena such as floods or droughts
5. Ordering, control, preservation, management, protection and/or recovery of water resources

/Annex E

Annex E

ACTIVITIES WITH A MANAGEMENT ORIENTATION

1. Plans and policies on water use
2. Legislation on the use and conservation of water resources
3. Economic and financial aspects
4. Organization and functioning of institutions and projects
5. Technological improvement at the level of both intermediate and advanced techniques
6. Formulation and execution of investment projects
7. Training of technicians, professionals or users
8. Organization of water users and especially promotion of community participation
9. Environmental management in general and conservation of water quality in particular
10. Promotion of horizontal or inter-institutional co-operation

/Annex F

Annex F

WAYS OF MAKING KNOWN THE RESULTS OF ACTIVITIES
OR PROJECTS TO GOVERNMENTS

1. Publication of reports, studies and documents

   (a) Restricted circulation
   (b) General circulation

2. Direct dissemination of information through conferences, talks, courses, etc.

3. Preparation of manuals, texts, atlases, etc.

4. Organization and execution of projects at the country level

5. Creation or strengthening of training centres, specialized institutes, institutionalized systems of inter-institute co-operation, information systems, etc.

6. Construction of works, or equipment of specialized centres, pilot areas, laboratories, etc.

7. Development of new technologies for working in the field (such as intermediate technology) or at headquarters (such as computer programmes or calculation procedures in general)

8. Others (specify)

Annex 3

PROGRESS IN THE IMPLEMENTATION OF THE MAR DEL PLATA ACTION PLAN IN THE COUNTRIES OF LATIN AMERICA

Since the United Nations Water Conference and the adoption of the Mar del Plata Action Plan in 1977 considerable change has occurred in the policies and programmes of the governments of the region related to water resources management. Much of this change has been in directions recommended within the Action Plan but it is not always clear that the countries can be said to be implementing the Action Plan in any explicit sense, particularly as there is evidence of a widespread ignorance of the resolutions and recommendations contained in the Action Plan in some countries of the region.

The areas of the Mar del Plata Action Plan where most initiatives have been taken are in institutional and legislative reform and water resources planning, in programmes in support of the International Drinking Water Supply and Sanitation Decade, the environmental dimensions of water resources management and in technical co-operation amongst the countries of the region.

A. Water resources planning, policy formulation, legislation and institutional aspects

Prior to 1977, three countries -Mexico, Venezuela and Peru- had undertaken major water resource planning exercises, establishing elaborate institutional machinery for planning and preparing long-term national water resource management plans. In recent years, a number of other countries have, at least, begun the process of preparing national plans, including Colombia, Ecuador, El Salvador and Honduras; equally, Mexico has prepared and published a revised plan.

The preparation of plans has normally demanded institutional adjustment taking the form of the establishment of a National Water Resources Commission integrating all public bodies with water resource related activities, as well as, on occasions, representatives of the private sector, as on the Commission in Venezuela. In addition, in a number of countries there has been a reallocation of managerial responsibilities between the central and regional or State authorities, including the creation of river basin commissions, such as the Guayas Commission in Ecuador.

A number of countries have revised and reformed legislations affecting water resource use and development since 1977 but no common tendency in the direction of change is apparent. For example, in Chile recent legislative reform has established private property in water rights whereas in many other countries recent legislation has tended to reinforce the role of the State in assigning water rights.

/B. Assessment

B. Assessment of water resources

In most countries of the region considerable emphasis has been given to improvements in the evaluation of the water resource, both in extending the collection of hydrometeorological data and in improving the methods for processing and storing the data. Many problems remain, however, in all areas of data collection, storage and retrieval and increased emphasis needs to be given to this vital area for improving water management.

C. Development and use of water for agriculture

In general, there has been considerable progress in the region in the development of the water resource for use in agriculture. The influence of the Mar del Plata Action Plan over development in agricultural water use is only now beginning to be felt due to the lengthy gestation periods not only of irrigation and other works destined to facilitate agricultural water use but in the introduction of changes in policy.

D. International Drinking Water Supply and Sanitation Decade

At the XXVI Directing Council Meeting of the Pan-American Health Organizatio held in 1979, a resolution was adopted urging Governments, apart from assigning priority to the extension of water supplies and sanitation services, to emphasize community participation in service projects, to adopt appropriate technologies and employ local supplies and equipment for the respective facilities, to further manpower and institutional development, and to explore innovative financing methods and services for programme development.

In many countries of the region, new initiatives are being taken in the sector. These include policies of decentralization of the management of the sector, notably in Argentina and Chile, a strong emphasis on self-financing through the adoption of an adequate tariff structure, and reconsideration of the technology being applied, particularly in sanitation, to reduce high capital investment costs. At the same time, considerable stress is being placed in all countries on the adoption of more effective administrative practices and on the general improvement of the technical and financial management of the sector, for example the Programme for Strengthening the Operation and Maintenance of the Drinking Water and Sewerage Services of Central America, Panama and the Dominican Republic. Heavy emphasis is being placed on manpower development and training. One successful experience involving a more concerted strategy towards the sector is reported by Brazil with its system of autonomous State water supply and sanitation companies combined with independent State environmental protection agencies and the Banco Nacional de Habitação, which is responsible for financing through loans at variable interest rates adjusted to select social criteria. In some countries emphasis is being placed on the extension of services to the dispersed rural population, particularly in Central America. A good example is the National Rural Basic Sanitation Plan (PLANSABAR) in El Salvador.

/E. Use

E. Use and development for industry, hydropower and other purposes

Information is only available for the use and development of the water resource for hydropower. Hydropower has continued to expand as an energy source in Latin America on the basis of both large-scale frequently binational projects such as Itaipú on the Paraná River and Salto Grande in the Uruguay and on micro-scale generating units installed in areas far apart as Southern Chile and Haiti.

The impact of changes comes, however, slowly in hydroelectricity due to the lengthy gestation period required for such large public works. The projects now being built have been under consideration, at least, since the decade of the sixties and it can be anticipated, therefore, that the impact of the Water Conference and the Action Plan is unlikely to be felt, particularly given the current world recession, until the next decade.

F. Education, training and research and development

Progress has occurred in training related to the IDWSSD, in Peru, in Brazil, in Central America and in the Eastern Caribbean. The importance of education and training is undeniably accepted in all the countries of the region.

G. Water quality management and environment

There is little information available on specific progress in this area particularly in water quality management. There is considerable interest in many countries in improving the consideration of the environmental dimension in water management and environmental studies are now incorporated in the evaluation of all major projects. Perhaps the best example is the work undertaken by the Argentina-Uruguay Comisión Técnica Mixta for the dam at Salto Grande but many other examples can be found as in Chile, Mexico and Venezuela.

H. Technical co-operation among developing countries in water resources development

Technical co-operation amongst the countries of Latin America is not new. It now occurs on a very large scale and can be found in almost all possible forms from the offering places in universities for foreign students to large-scale advisory activities, such as that provided by the Chilean electric power company ENDESA to many countries of Central America, the assistance given by Venezuela to Peru in the preparation of its national water resources plan and the Cuban assistance to Jamaica in the construction of small hydroelectricity generating stations. In addition, Latin American manufacturers of water related equipment increasingly are competing with extra-regional suppliers.

/Recent examples

Recent examples include the supply of water meters from Chile to Bolivia, turbines from Argentina to Colombia and the construction by Brazilian contractors of the extension of the Guri dam in Venezuela.

Many international organizations in the region have active programmes to encourage technical co-operation. CEPAL has held two seminars on possible forms of co-operation for the IDWSSD.

Annex 4

PROPOSED CONTENTS OF THE DOCUMENT ON THE WATER RESOURCES OF LATIN AMERICA

(Present situation and future prospects)

I. Introduction

First of all, it should be specified that the document is a progress report on the Mar del Plata Action Plan and will be presented to the Water Committee.

Emphasis should also be placed on the practical nature which it is desired to impart to the document as a continuation of the work begun with the publication of The Water Resources of Latin America (E/CONF.70/A.16).

In this chapter, a brief explanation will be given of the importance of the proper utilization of the water resources of Latin America as a function of the economic and social development of the region.

Brief global statistics will be included on the present supply and demand situation as regards water, together with some projections. These statistics could refer to quantity, quality and distribution in time and place.

Reference will also be made to the existing background information as regards similar studies, especially the work done by CEPAL, and it should be explained what the new contributions made in this document are.

II. Balance-sheet of water resources in Latin America

1. Balance-sheet of water resources

This will be based on the supply and/or demand studies effected at the level of Latin America, South America, Central America, the Caribbean islands and other areas (regionalization tables). A brief description will be given of the progress made in this matter by the countries of the region and balance-sheets prepared for the different countries will be attached (annex with balance-sheets for individual countries).

2. Supply of water resources

In this section, a set of statistics will have to be presented on the supply of water in Latin America as regards quantity, quality, place and time. The tables could include information on the hydrographic systems with their main statistics, mean precipitation curves (isohyets), data on the navigability of rivers, potential hydroelectric power generation, etc.

This section must draw a distinction between the natural or potential supply and the real supply which can be obtained through hydraulic works or special management of this resource.

/Detailed attention

Detailed attention will be given to surface water and underground water, the supplies of these, and the technological levels (models, for example) achieved in the countries for their study. The water supply must be explained in its different forms.

3. Demand for and use of water resources

This section should analyse the use made of water in terms of quantity, quality and place in the short, medium and long term.

An effort should be made to give comparative analyses of the projections of the various kinds of demand by countries, regions, etc.

A distinction will be made between the types of demand by user sectors (domestic, agricultural, energy, etc.).

4. Natural and artificial conflicts between supply and demand

Details will be given of cases of incompatibility between water supply and demand as regards quantity, quality, place or time of occurrence.

The part played by water projects in environmental management will be explained. The importance of this management will be highlighted with special attention to water use and the responsibility of heads of projects to familiarize themselves with all its consequences. Concepts regarding environmental management and development will be briefly developed.

Particular attention will be given to the extreme phenomena of drought and flooding, together with the problems of aridity or semi-aridity, upland areas, etc.

Special mention will be made of the problems of water contamination by human agents, and a description will be given of the distribution of such problems in Latin America, the efforts made to check them, and other pertinent aspects, such as the institutions working in this field, for example.

III. Water development technologies

1. Technological advances in the field of water resources

A brief classification and description will be given of the technological advances made in reconciling water supply with demand. These will be classified in two groups:

- techniques to increase the effective supply of water
  - construction of water control works
  - management of the natural resources of a basin
- techniques to reduce demand
  - increases in efficiency of use
  - reduction of demand per user unit

These will be presented in accordance with their potential for application in time (traditional, modern or in current use, and future).

/2. Techniques

2. Techniques to increase the effective supply of water

(a) Water resource development projects

A classification and brief description will be given of the main water projects in Latin America: multiple or sectoral projects, projects at the level of hydrographic basins or parts of basins, etc.

(b) Projects for the management of hydrographic basins

A classification and description will be given of the main projects for the management, conservation or protection of hydrographic basins in Latin America. The advances made in this field will be described, together with the projections in respect of this activity. This will include projects, organizations, training centres, institutions, methodologies used, etc.

3. Techniques to reduce water demand

(a) Increasing efficiency of use

A description will be given of recent examples of works designed to improve the operation of water systems in order to reduce losses suffered at present on account of deficient utilization of water in human settlements, agriculture and other areas.

Emphasis will be placed on the experience regarding the need to improve the operational phase of projects in general.

A description will be given of the projects already carried out or under consideration for increasing the efficiency of water use. Statistics on water use efficiency will be included and a comparative analysis will be made of countries, cities, irrigation projects, etc.

(b) Reduction of demand per user unit

An analysis will be made of the extent to which water demand per user unit can be reduced in different cases, especially at the urban and agricultural levels.

Reference will be made to treatment plants for the reutilization of water (especially waste water) and the effect of water charges.

IV. Planning and management of water resources

Some reference will be made to the utilization of water resources for development purposes. Brief reference will also be made to the need to plan this utilization in the long term and the concepts of this planning will be examined.

1. The role of the State in the planning of water resources

The role of the State in managing the utilization of the water resources of the country will be dealt with, and national water use plans will be described.

/Particular emphasis

Particular emphasis will be placed on the territorial division of countries for the purposes of water planning (water regionalization). If possible, a map of South America will be given, showing the water regions of each country.

A list of national plans will be given.

2. Economic and financial aspects of water development

This sub-chapter will deal with the investments of banks, countries, regions, etc., in the rational utilization of water resources.

Comparative analyses will be made of these investments.

The information given could include projections of the demand for investments by particular sectors: for the International Drinking Water Supply and Sanitation Decade, for the generation of hydroelectric power, for irrigation, etc.

An analysis will also be made of the forms of lending (sources of credit, interest rates, etc.) and the forms of recovery of investments, especially water charges in the different sectors.

If possible, details will be included of the updated unit costs of different water utilization systems.

3. Political and legal aspects connected with water resources

An effort will be made to provide an updated list of the codes, laws and regulations currently in force in Latin America with regard to water. An analysis will be made of the main differences between them (ownership of water, etc.).

Reference should also be made to the international treaties in force with regard to international river basins.

4. Social and cultural aspects connected with water resources

A description will be given of the population to be supplied (especially in the rural and urban sector) and its needs.

The training of water users and of their organizations will be dealt with. Reference will also be made to the need for training middle-level management and professionals.

A list will be made of the main regional and national programmes and institutions providing training on water resources in Latin America.

Another fundamental aspect will be analysis of the advances made in this field through research, and an effort will be made to identify areas requiring more study.

5. Institutional and organizational aspects connected with the use of water resources

A description will be given of the way in which the institutional systems of the countries are organized for carrying out action on water use.

/A list

A list will be made of the institutions and of their common features, indicating the ways in which they operate, their functions, the way they act at the national level, the technical facilities at their disposal, their type of personnel, their main needs, etc.

Special emphasis will be placed on determination of the ways in which these organizations reach users and the middle-level management personnel at their disposal for this and other pertinent purposes.

6. Water resources and information systems

A description will be given of the information systems existing in the countries of the region for planning, constructing or operating water systems and for managing natural hydrological systems or river basins. The organization of this section will be based on the information system developed by the Water Resources Unit (annexes may be included describing the information systems existing in Latin America).

VI. The role of international agencies with regard to water resources in Latin America

A description will be given of the main international agencies working in the water sector in Latin America and the role played by them: the United Nations system, the Organization of American States, governmental bodies providing technical assistance (IDA, CIDA, bodies of the Netherlands, French and German Governments, etc.).

VII. Horizontal co-operation among countries

A description will be given of the levels of co-operation achieved.

VIII. References

IX. Annexes