directing council

PAN AMERICAN HEALTH ORGANIZATION

regional committee

WORLD HEALTH ORGANIZATION

XIV Meeting | Washington, D. C. September 1963 | XV Meeting

Item 28 of the Draft Agenda

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ORIGINAL: SPANISH

REPORT ON PROGRESS IN CONTINENTAL WATER SUPPLY AND SEWAGE DISPOSAL PROGRAM WITH PARTICULAR REFERENCE TO RURAL DEVELOPMENTS

At the XVI Pan American Sanitary Conference held in Minneapolis in September 1962 a detailed report was submitted on the activities of the Organization during the last 4 years in the important field of water supply and sewage disposal. As the progress made in the past year shows, the rate of advance has been maintained and possibly even increased.

The Meeting of the Task Force on Health at the Ministerial Level, held in April of this year, helped to accentuate the priority that should be given to the solution of water supply and sewage disposal problems in our countries. At that meeting emphasis was mainly laid on the problem in rural areas, and ways of solving the problems involved in the financing and administration of such services were discussed. It was acknowledged that the progress made in the urban areas was very satisfactory and that it might well be possible to exceed the goal laid down in the Charter of Punta del Este. The creation of a special rural welfare fund for the purpose of solving the water problem in rural areas was possibly one of the most important recommendations that came out of this meeting. A separate document on means of financing this Fund is being submitted to the Directing Council.

This year efforts to increase the number of trained professional and auxiliary personnel have been intensified, as have been those aimed at improving teaching and research in the field of sanitary engineering, especially in subjects directly related to water supply and sewage disposal and kindred matters. Special attention should be given to the possibility of setting up national centers or institutes in the various countries to carry on research and to teach sanitary engineering as well as to the initiation of programs to investigate the possibility of using ground water for domestic consumption.

A. LOANS BY INTERNATIONAL BANKS

Since 1961, international credit organizations have given favorable consideration to and approved loans for the extension of existing systems of water supply and sewage disposal or the construction of new ones. Table No. I shows the loans made by the Inter-American Development Bank and the International Bank for Reconstruction and Development (World Bank) to date.

TABLE I

INTERNATIONAL LOANS AND LOCAL FUNDS FOR WATER SUPPLY AND SEWAGE DISPOSAL
(Inter-American Development Bank and World Bank)
1961 - July 1963

Country	City	Total population benefited	Funds assigned (Loans + local contributions)
Brazil	Salvador	674,000	8,127,000
	State of Guanabara	3,300,000	76,010,000
	5 towns in the N.E.	5,000,000	18,422,000
Chile	Concepcion y Talcahuano	205,000	6,050,000
	Santiago	1,600,000	10,125,000
Colombia	Buenaventura	50,000	
	Cali	500,000	4,114,000
	Cartagena	126,000	10,834,000
	Cucuta	110,000	9,163,000
	Medellin	565,000	10,048,000
	More than 300 rural communities	2,958,000	37,800,000
Ecuador	Quito	350,000	5,015,000
	18 towns	108,000	7,178,000
El Salvador	5 towns	372,000	3,500,000
	34 towns	236,000	3,830,000
Guatemala	Puerto Barrios	10,000	265,000
	82 rural communities	120,000	5,150,000
Honduras	Tegucigalpa	165,000	2,700,000
Mexico	12 towns in Yucatan	277,414	15,400,000
Panama	Several towns	78,600	5,842,000
Peru	Arequipa	122,000	6,400,000
Uruguay	Montevideo	1,200,000	14,843,000
Venezuela	Maracaibo	370,000	19,666,000
	55 towns	379,000	21,000,000
	330 rural communities	300,000	20,000,000
	Total:	19,176,014	321,482,000

As will be seen, loans together with the funds contributed by Governments and the beneficiary cities amounted to a grand total of $321,482,000 and will provide water services to a population of approximately 19,176,000 and public sewage disposal services to a slightly smaller number. Applications pending and under consideration by these two Banks at present exceed US$100,000,000, which amount will be matched by a similar sum in local currency.

Other bi-lateral and credit institutions such as the Agency for International Development, the Import Export Bank, and the Development Loan Fund have made loans for water supply and sewage disposal systems in an amount exceeding $50,000,000 to towns in Brazil, Chile, Costa Rica, Jamaica, Panama, Peru, and Uruguay.

Mention should also be made of the fact that the World Bank has established within its Industries Division an office dealing exclusively with applications for loans for water and sewage disposal systems. In this way new sources for financing water projects on favorable terms are becoming accessible to our countries.

It should be emphasized that the conditions for these international loans are still rather strict. The Organization is therefore continuing to assist Governments in submitting well-conceived projects characterized by good organization, sound administration, and a sound financial basis, features that guarantee that they will be favorably received by credit institutions. In future more attention will have to be given to the construction, operation, and administration of new or improved services, and the Organization will have to expand its advisory services so as to be able to enter the more complicated areas of engineering such as the preparation of specifications and contracts, purchase of equipment, accounting, invoicing and rating as well as purely administrative activities, scientific information and education, public relations, and the like.

B. RURAL WATER SUPPLY

Progress in this field has not been as marked as that in urban water supply nor as satisfactory in relation to the goals fixed in the Charter of Punta del Este. Of the loans made by the Inter-American Development Bank only those granted to Colombia, Guatemala, El Salvador, and Venezuela could be considered to fall into this group, although in the case of Colombia and Guatemala rather large communities which might not be regarded as falling within this category are involved.

In most countries very limited programs are being carried out, and mainly as demonstration programs. The local health authorities are participating in these programs, which in some cases are being assisted by UNICEF. However, the population benefiting from this type of program is small compared with the rural population in need of these services.

There are indications, in some of these programs, that the rural population may be capable and willing to provide part of the cost, either by providing manpower or money, of more permanent water supply works. Agenda Item 31 deals in detail with the problem of rural areas, and outlines a plan for financing and developing this type of program. It is generally thought that a study of this problem plus the experience gained in certain countries will make it possible to intensify the construction of water supply systems in rural areas in Latin America.

C. EDUCATION AND TRAINING

Emphasis continues to be laid on the importance and need for having a suitable number of engineering and auxiliary personnel for the normal development of water programs. With the direct assistance of the Organization, a 3-month course on water supply design was held at the National University of Mexico and attended by 35 engineers working in the water agencies of various countries. Under the auspices of the Inter-American Development Bank and the Organization, a symposium was held in Medellin, Colombia, on the administration of water supply and sewage disposal systems. It was attended by about 50 engineers and administrators holding senior positions in cities that are to receive loans from the Bank. It is believed that these two activities are basic in the training of professional personnel who are to participate in the design of the works to be constructed and of the personnel who are to administer and operate the new or improved services.

The Organization has also contributed in this field by sending fellows to the following courses organized by the United States Agency for International Development: course on the administration of water supply systems, at the University of Akron, Ohio; course on the design of water supply systems, at the University of North Carolina; and a course on the use of ground water, at the National University of Costa Rica. The Organization has also continued to assist countries by awarding fellowships to engineers to enable them to attend regular sanitary engineering courses in the United States, Mexico, São Paulo, Brazil, and by organizing visits to various countries to study and observe water services operating under satisfactory self-financing conditions. It is estimated that in the last twelve months about 150 engineers and other professionals have benefited from these education and training activities.

The Organization has stimulated and is given assistance to Argentina, Brazil, Costa Rica, Guatemala, Mexico, Trinidad, and Venezuela in presenting to the United Nations Special Fund projects for the establishment of institutes for the improvement of teaching and research in the field of sanitary engineering. One project has already been approved for the National University of Colombia, in Bogota, where the teaching of engineering as related to water supply and sewage disposal services will be intensified.

With the financial assistance of the Organization of the American States four short courses are being planned on specific subjects connected with the design of water systems and the use of ground water in Brazil, Mexico, Caribbean Area and Venezuela. These courses will be held in the second half of 1963 and will make it possible to train more than 120 engineers and other key professional personnel of the water services of these countries. It is planned to continue this activity in other countries in the near future as part of the training of engineers working in water projects and in order to stimulate continuing on in-service education in Latin American Universities.

D. ADVISORY SERVICES OF THE ORGANIZATION

During the past twelve months the following services have been provided to the countries of the Organization:

1. Long-term advisory services in the design and administration of water systems to the Governments of Colombia, El Salvador, Mexico, Nicaragua, Peru, Venezuela, Dominican Republic, St. Lucia and Dominica, and British Honduras. In the next two months long-term advisory services will be provided to Costa Rica and Ecuador.

2. Short-term advisory services in the field of administration and organization to the Governments of Colombia, Costa Rica, Ecuador, Guatemala, Paraguay, Venezuela, Dominican Republic, Trinidad, and St. Lucia.

3. Advisory services on accounting to Colombia and Peru.

4. Advisory services on water rates to Panama.

5. Advisory services on well drilling to Colombia, Peru, and Mexico.

6. Short-term advisory services on design and administration to the city of Monterrey, Nuevo Leon, Mexico.

7. Advisory services on the preparation of documents for research on ground water in Costa Rica, Guatemala, Honduras, El Salvador, Nicaragua, Panama, Mexico, and Trinidad.

8. Assistance to the Governments of Colombia, Brazil, St. Lucia, Barbados, Trinidad and St. Kitts on problems connected with the fluoridation of drinking water systems.

9. Consultant services on problems of water pollution, and the treatment of waste water and sewage to the city of Buenos Aires, Argentina, and to the Governments of Costa Rica, El Salvador, and Barbados.

10. Advisory services in the field of education and public information to Venezuela and Colombia.

11. Joint activities of the Organization and the Inter-American Development Bank concerning technical assistance to Brazil and El Salvador.

12. Assistance in connection with loan applications to Argentina, Bolivia, Ecuador, Guatemala, Haiti, Mexico, Paraguay, Venezuela, and the Dominican Republic.

13. Through its permanent staff of engineers, the Organization has provided advisory services and assistance in the solution of problems connected with water supply and sewage disposal to practically all the countries through their Ministries of Public Health, Ministries of Public Works, local and national sanitary works authorities, municipalities and other government agencies.

E. STATUS OF THE COMMUNITY WATER SUPPLY FUND

In 1963 the Government of the United States of America made a contribution of $300,000, which will probably be used up by 1 January 1964. Negotiations are in progress with national organizations responsible for water programs and there are unofficial indications that contributions will be made by Colombia, Peru, and Venezuela. Recently the Governments of the Organization were again urged to support the Community Water Supply Fund in view especially of the immediate commitments of the Organization and the requests it is receiving from Governments to increase the assistance being given to countries in this important continent-wide program.

F. FUTURE ACTIVITIES

The summary description given above of the activities of the Organization in the past 12 months shows the great opportunities that are opening up for continued assistance to the countries of the Americas in the field of water supply and sewage disposal. In accordance with the present trend it will be necessary to increase the assistance given to countries in various complex aspects of engineering such as that connected with water supply in large cities with water pollution problems. In many cases water resources, in particular ground water resources, are being investigated with a view to using them for water supply purposes, and this development calls for greater PAHO assistance.

Another aspect that deserves to be given preferential attention is the administration and operation of new services. Accordingly, it is foreseen that the Organization will increase its assistance to countries in the matter of construction, administration, and operation of new systems. The training of personnel in these phases will be given special attention by the Organization and the countries.

The possible creation of a special fund for programs in rural areas, together with the intensification of work in urban areas, will create a series of problems which will be solved by means of close collaboration between the Ministries of Public Health and other public health agencies for sanitary works. These activities will necessitate closer contact with universities with respect to the preparation and training of personnel and to research on sanitary engineering problems. It is the intention of the Organization to collaborate as much as possible with the countries in the next few years in carrying out all these activities and programs, which will call for a considerable effort on the part of the Governments of the Organization. It is hoped that in this way we shall draw closer to the goals fixed by the Charter of Punta del Este with regard to water supply, for the improvement of the health and the living conditions of the peoples of the Americas.

directing council

PAN AMERICAN HEALTH ORGANIZATION

XIV Meeting

regional committee

WORLD HEALTH ORGANIZATION

XV Meeting

Washington, D. C.
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Draft Agenda Item 28

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ADDENDUM I
17 September 1963
ORIGINAL: SPANISH

REPORT ON PROGRESS IN THE CONTINENTAL WATER SUPPLY AND SEWAGE DISPOSAL PROGRAM WITH PARTICULAR REFERENCE TO RURAL DEVELOPMENTS

(Document presented by the Government of Mexico)

"WATER SUPPLY IN RURAL AREAS"

REPORT REGARDING WATER SUPPLY IN RURAL AREAS, PRESENTED BY THE SECRETARIAT OF HEALTH AND WELFARE OF THE REPUBLIC OF MEXICO TO THE XIV MEETING OF THE DIRECTING COUNCIL, XV MEETING OF THE REGIONAL COMMITTEE OF THE WORLD HEALTH ORGANIZATION FOR THE AMERICAS

Bearing in mind the need for improving the living conditions of the population in rural areas, who make up 49.6 per cent of the national population, not only for strictly public health reasons but also for social and economic reasons, and because one of the primary foundations for attaining those aims is for the communities to have water service, the Secretariat of Health and Welfare of the Republic of Mexico a water supply program covering towns of from 500 to a maximum of 2,500 population that were completely within what is defined demographically as a rural area.

The localities where the program was to be carried out were selected in accordance with two main considerations: a) The source of supply. b) The cooperation offered by the inhabitants of the communities.

a. Source of supply: Since very few towns have springs or surface water sources that do not require treatment to render them potable, it has been necessary to supply them by means of wells and in certain cases by means of filtration galleries. Geological engineers were employed to determine the best locations for the wells or filtration galleries.

b. Cooperation offered by the inhabitants: This consists in the provision of local materials, such as stone, gravel, sand and bricks, and unskilled labor.

When the possibility of a source of supply is known, as well as its accessibility to the center of operations of the work zone, the topography of the locality and of the line from the source to the community, if they are distant from each other, is surveyed and all the other field data needed, such as information on the kind of land, are obtained.

With this information, the plan for the water supply system is prepared. This service is provided by public water points or taps, in line with the following standards:

Prediction of the future population: For technical and economic reasons, an increase of 30 per cent over a period of ten years is assumed.

Supply: A supply of 75 liters per inhabitant per day is assumed.

Coefficient of variation: When the demand curve of a system containg public water points is not known, a coefficient of 2 is estimated.

Number of water points: When there is a defined population in an urban center, the number of water points is calculated in relation to the number of inhabitants, and when the population is scattered it is calculated in terms of the distance between water points.

As a constituent part of each system at least one building called a water unit is built in each community. This unit consists of 3 baths for women, 3 baths for men, and a battery of 10 wash tubs.

On the basis of the foregoing general ideas, the Secretariat of Health and Welfare of the Republic of Mexico began this program in 1961. Down to the end of 1962, 89 communities with a population of 101,512 had been benefitted.

During 1963, thanks to the financial impetus that was given to this program, 199 towns have been provided with water service and 487 others are in the process of them. The total population to be served this year is 986,397. Of these 686 localities, 124 are served from surface sources and the rest from underground sources. When these works are finished, 200,000 meters of adduction lines and 901,132 meters of distribution lines will have been laid and there will be 9,791 water points in operation. Because of the special characteristics of one zone in the northeastern part of the country, specifically the State of Sonora, and because of climatic and economic conditions in that zone, the service was planned on the basis of pipes permitting home connections, and when these works are finished there will be 2,387 connections.

The organization, study, planning, and execution of these works is being carried out by the Construction Committee of the Secretariat of Health an Welfare.

It can clearly be seen that in terms of the number of localities and inhabitants served the work is still in its initial phase, and needs to be continued, but this first step will be very useful inasmuch as subsequent evaluation of the benefits obtained will give a better understanding of the problem.

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WORLD HEALTH ORGANIZATION

XV Meeting

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ADDENDUM II
21 September 1963
ORIGINAL: ENGLISH

REPORT ON PROGRESS IN THE CONTINENTAL WATER SUPPLY AND SEWAGE DISPOSAL PROGRAM WITH PARTICULAR REFERENCE TO RURAL DEVELOPMENTS

Funds Allocated for Water and Sewer Systems

Country	BID	BIRD	AID	EXIMBANK	Local Contribution
Brazil	$ 52,110,000		$21,197,300		$ 49,694,400
Chile	8,645,000		2,840,000		8,104,000
Colombia	32,986,442				36,334,158
Costa Rica			3,500,000	$ 4,500,000	2,300,000
Ecuador	8,500,000				2,749,000
El Salvador	4,800,000				2,530,000
Guatemala	3,675,000				1,740,000
Haiti					
Honduras	2,150,000		3,050,000		550,000
Jamaica			2,200,000		
Mexico	9,200,000				6,080,000
Nicaragua		3,000,000			3,000,000
Panama	2,762,000		9,815,007		2,553,000
Paraguay			3,517,000	8,250,000	
Peru	3,921,849		8,600,000	6,500,000	6,489,000
Uruguay	8,243,000		7,500,000	7,500,000	18,257,000
Venezuela	26,000,000				35,600,000
	$162,993,291	$3,000,000	$62,219,307	$26,750,000	$175,980,558

International Loans: $254,962,598
Grand Total: $430,943,156

Note: Not included the loans or grants dedicated exclusively to Technical Assistance (PAHO, AID, BID, U.N. Fund). Not included the grants made by UNICEF, CARE, etc.