PDKAV206

AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D.C. 20523

ASSISTANT
ADMINISTRATOR

Dr. Carlyle Guerra de Macedo
Director, Pan American Health Organization
525 23rd St., N.W.
Washington, D. C. 20037

Subject: Accelerated Immunization II Project, 598-0786
Grant No. LAC-0786-G-00-1031-00

Dear Dr. Guerra de Macedo:

1. I have the honor to refer to your letter request of April 24, 1991, relating to a program for child survival, entitled Accelerated Immunization II.

2. I am pleased to inform you that, pursuant to the authority contained in the Foreign Assistance Act of 1961, as amended, the Government of the United States of America, acting through the Agency for International Development (hereinafter "A.I.D.") hereby grants to the Pan American Health Organization, Regional Office of the World Health Organization (hereinafter "PAHO" or "Grantee"), the sum of Two Million Two Hundred Two Thousand, Four Hundred Ninety-eight United States Dollars (U.S. $2,202,498) (the "Grant") to be used for support of a project to improve child survival in the Americas by reducing the incidence of immuno-preventable diseases. The project purpose is to increase efficiency and effectiveness of immunization services by reducing missed opportunities to vaccinate and improving geographic access of immunization services. This will be accomplished by improving norms, training, and supervision for neonatal tetanus, measles, and missed opportunities to vaccinate; by improving targeting of immunization program resources to problem areas; and by improving sustainability of immunization programs, as more fully described in Attachment 2.

3. A.I.D.'s total contribution to the Program, both regional and country-specific, will be provided in increments not to exceed a total of Twenty Million United States dollars (U.S. $20,000,000), during the period July 10, 1991 through July 31, 1996, the initial increment being made available in accordance with paragraph 2 of this Agreement. Subsequent increments will be subject to the availability of funds to A.I.D. for this purpose and to the mutual agreement of the Parties, at the time of a subsequent increment, to proceed.

4. This Grant is effective and obligation is made as of the date of this letter and shall apply to expenditures made by the Grantee in furtherance of program objectives during the period July 10, 1991, through July 31, 1996. Funds disbursed by A.I.D. but uncommitted by the Grantee at the expiration of this period shall be refunded to A.I.D.

5. This grant is made to the Grantee on condition that the funds will be administered in accordance with the terms and conditions as set forth in Attachment 1 (the Schedule); Attachment 2 (the PAHO Proposal--the Project Description); and Attachment 3 (the Standard Provisions); all of which have been agreed to by your organization.

6. It is understood that financial records, including documentation to support entries on accounting records and to substantiate charges to this Grant shall be maintained in accordance with the Grantee's usual accounting procedures, which shall follow generally accepted accounting practices. All such financial records shall be maintained for at least three (3) years after final disbursement of funds under this Grant.

7. It is understood that the funds granted hereunder shall be disbursed as set forth in Standard Provision 12., "Payment (Letter of Credit)".

8. The Parties agree that this Grant and the activities financed therewith shall be managed by the Grantee in accordance with its established policies and procedures. The proposed budget for this Grant is provided paragraph D of the Schedule.

9. The Grantee shall prepare and submit to A.I.D. the required financial and technical reports in accordance with paragraph E of the Schedule, attached.

10. This Agreement may be terminated in accord with Standard Provision 4., "Termination Procedures."

11. Prior to disbursement of Grant funds the Grantee and A.I.D. shall mutually agree to the candidates proposed for key Grantee staff assigned to manage and administer the Project.

12. Present statutory and other authorities prohibit the use of A.I.D. funding for programs in certain countries in Latin America and the Caribbean. One country which may not receive A.I.D. funding under this project is Cuba. A.I.D. will inform PAHO in writing of other countries which may, because of statutory or other prohibitions, become ineligible to receive A.I.D. funding during the life of this project or of countries to which statutory or other prohibitions no longer apply.

13. Prior to disbursement of Grant funds for country-specific activities, the Grantee shall provide to A.I.D., for A.I.D.'s review and approval, the implementation plan for that country, as more fully described in Attachment 2.

14. Please indicate your acceptance of this Grant by signing the original and eight (8) copies of this letter in the space provided below and returning the original and six (6) copies to the Grant Officer. Two copies may be retained for your files.

15. The A.I.D. Technical Office responsible for monitoring this Grant is the Health, Population, and Nutrition Division, Office of Development Resources, Bureau for Latin America and the Caribbean (AID/LAC/DR/HPN), Room 2247A-NS, Washington, D. C. 20523-0010.

AGENCY FOR INTERNATIONAL DEVELOPMENT

BY: James H Michel
James Michel

TITLE: Assistant Administrator
Bureau for Latin America
and the Caribbean

DATE: July 10, 1991

Attachments:
1. Schedule
2. PAHO Proposal (program description)
3. Standard Provisions

ACCEPTED:

Pan American Health Organization

BY: _____

TITLE: Director

DATE: 10 July 1991

Appropriation No. 72-1111021.7
Allotment Nos. 147-65-598-00-69-11 (LAC Regional) and
147-50-524-00-69-11 (Nicaragua)
Obligation Nos. 1653408 (LAC) and 10067 (Nicaragua)

FISCAL DATA

LAC REGIONAL:

Project:	598-0786, Accelerated Immunization II
Amount:	$2,000,000
Appropriation:	72-1111021.7
Allotment:	147-65-598-00-69-11
BPC:	LDCA91-35598-KG12
Obligation No:	1653408

Nicaragua:

Project:	524-0321, Expanded Program of Immunization
Amount:	$202,498
Appropriation:	72-1111021.7
Allotment:	147-50-524-00-69-11
BPC:	LDCA91-25524-KG13
Obligation No:	10067

FUNDS RESERVED BY:
Initials: lhb
Date Posted: 7/9/91
PFM/FM/A/PNP
OFFICE OF FINANCIAL MANAGEMENT

SCHEDULE

A. Purpose of Grant

The purpose of this Grant is to provide support for the Regional Immunization Program, as more specifically described in Attachment 2 (the Program Description) of this Grant.

B. Period of Grant

1. The effective date of this Grant is July 10, 1991. The estimated expiration date of this Grant is July 31, 1996.

2. Funds obligated hereunder are available for program expenditures for the period from July 10, 1991 to approximately July 31, 1992 as shown in the Grant Budget below.

C. Amount of Grant and Payment

1. The total estimated amount of this Grant for the period shown in B.1. above is $20,000,000.

2. A.I.D. hereby obligates the amount $2,202,498 for program expenditures during the period set forth in B.2. above and as shown in the Grant Budget below.

3. Payment shall be made to the Grantee in accordance with procedures set forth in Attachment 3 (the Standard Provisions).

4. Additional funds up to the total amount of the grant shown in C.1. above may be obligated by A.I.D. subject to the availability of funds, the mutual agreement of the parties to proceed, and the requirements of the Standard Provision of the Grant entitled "Revision of Grant Budget."

D. Grant Budget

The following is the Grant Budget. Revisions to this Budget shall be made in accordance with the Standard Provision of this Grant entitled "Revision of Grant Budget."

SUMMARY A.I.D. GRANT BUDGET, BY YEAR AND BUDGET CATEGORY
(U.S. $1,000's)

Category	1991	1992	1993	1994	1995	LOP
P'nnel	557	586	623	665	693	3,124
Surv/ Info	260	260	260	260	260	1,300
Mtgs.	240	240	240	240	240	1,200
Labs	240	240	240	240	240	1,200
Trng.	360	360	360	360	360	1,800
Mobil.	670	670	670	670	670	3,350
ColdChn	416	461	357	343	249	1,826
R'srch	300	300	300	300	300	1,500
Eval.	280	280	275	170	195	1,200
Conting	220	220	220	220	319	1,199
TOTAL	3,543	3,617	3,545	3,468	3,526	17,699
O'HEAD (13%)	474	470	461	451	445	2,301
GRAND TOTAL	4,117	4,087	4,006	3,919	3,871	20,000

SUMMARY PROJECT BUDGET, BY BUDGET CATEGORY AND SOURCE
(U. S. $1000's)

Category	PAHO Total	USAID Total	USAID Regional	USAID Missions	PROJECT TOTAL
Personnel	5,970	3,124	3,124	0	9,094
Surveil/Info	250	1,300	800	500	1,550
Meetings	250	1,200	900	300	1,450
Laboratories	200	1,200	700	500	1,400
Training	300	1,800	700	1,100	2,100
Mobilization	0	3,350	350	3,000	3,350
Cold Chain	300	1,826	226	1,600	2,126
Research	250	1,500	500	1,000	1,750
Evaluation	400	1,200	500	700	1,600
Contingency	0	1,199	750	449	1,199
Total	7,920	17,699	8,550	9,149	25,619
Overhead	0	2,301	1,112	1,189	2,301
Grand Total	7,920	20,000	9,662	10,338	27,920

E. Reporting and Evaluation

The PAHO Project Manager will submit to the Project Officer at AID/LAC/DR/HPN, Rm 2247 NS, Agency for International Development, Washington, D. C. 20053-0010, a quarterly status report covering implementation progress and projecting activities for the next quarter. The format of this report should be consistent with all LAC Bureau reports and will be provided by the AID/LAC Project Officer.

PAHO will submit an annual workplan to the Project Officer, including a budget which must be agreed upon by both organizations prior to implementation of the proposed plan.

The project will be jointly evaluated after two years and at the end of the project. The evaluation criteria will be mutually agreed upon by AID and PAHO. The evaluations will be conducted with the participation of AID, PAHO, and independent contractors selected by AID. Cost for the evaluations will be covered by the Project.

The Grantee shall prepare and submit 2 copies of each report required by this grant to the Bureau for Program and Policy Coordination, Center for Development Information and Evaluation, Development Information Division (PPC/CDIE/DI). All documents should be mailed to:

PPC/CDIE/DI
ACQUISITION
Room 209, SA-18
Agency for International Development
Washington, D. C. 20523

The title of all reports forwarded shall include a descriptive title, the author's name(s), grant number, the project number and title, grantee's name, name of the A.I.D. project office, and the publication or issuance date of the report.

Attachment 2

PAN AMERICAN HEALTH ORGANIZATION

Pan American Sanitary Bureau, Regional Office of the

WORLD HEALTH ORGANIZATION

ACCELERATED IMMUNIZATION PROJECT

PHASE II, 1991-1995

PAHO PROPOSAL TO THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

28 June 1991

ACCELERATED IMMUNIZATION PROJECT

PHASE II, 1991-1995

PAHO Proposal to the US Agency for International Development

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I. INTRODUCTION

Between 1987 and 1990 PAHO implemented, in conjunction with a Grant from the USAID, an Accelerated Immunization Project, Phase I, with the major objectives of increasing vaccine coverage against vaccine preventable childhood diseases in the Americas and to interrupt indigenous transmission of wild poliovirus, therefore achieving poliomyelitis eradication in the Western Hemisphere.

Significant progress was made during Phase I of this Project, but much remains to be done. PAHO hereby proposes a five-year follow-on grant from AID to form, in combination with PAHO's own funds, the Accelerated Immunization II Project. This project will contribute to the continued reduction of vaccine-preventable diseases in the Americas, especially measles and neo-natal tetanus, which are major killers of infants and children. This will be accomplished by using project funds for activities which contribute to increasing complete vaccine coverage for a 90% of infants before their first birthdays, and 80% of women and childbearing ages in the areas at risk for neonatal tetanus. These activities are, of necessity, carried out on a regional basis. As the vaccine-preventable diseases do not recognize political boundaries, it is necessary for the countries of the region to have a mechanism for working together to reduce disease burdens. The specialized technical expertise necessary to change surveillance and immunization programming can work in more than one country, using a regional mechanism. Lessons learned in one country can thus more easily be applied to others.

What is proposed is a project that will enable PAHO to provide technical cooperation to the implementation of immunization programs in the various countries, which will provide in some cases material assistance to make the improvement of such programs and surveillance of vaccine preventable diseases possible throughout the Region of the Americas.

II. PROJECT BACKGROUND

A. Problem Statement

In spite of considerable progress attained by immunization programs in the various countries, it is estimated that over 50,000 preventable deaths due to measles, pertussis and neonatal tetanus are occurring every year in the Americas. This is equivalent to about 25% of the deaths from acute respiratory infections, dehydration due to diarrhea, and vaccine-preventable diseases combined (Many deaths attributed to diarrhea or acute respiratory infectious have had as originating cause either measles or pertussis infectious). In Latin America and the Caribbean, it is estimated that up to 25% of children who become infected with measles may die as the result of complications, especially younger children who are malnourished or who also have diarrhea.

Almost all (90%) of infants who contract neonatal tetanus will die as a result. These deaths could be prevented with effective, inexpensive immunizations, which are not currently being delivered to the entire population at risk. This proposed project is designed to address constraints to more efficient and effective delivery of vaccination services in the Americas. One indicator of achievement of the goals to which this Project is directed will be the elimination of neonatal tetanus and the reduction in measles incidence, as well as the completion and certification of eradication of polio caused by the wild virus. It is estimated that the current Regional Immunization Program is preventing over 50,000 deaths from measles, pertussis and neonatal tetanus annually and over 20,000 cases of poliomyelitis, compared to levels which existed before it began in 1978.

As far as morbidity is concerned, it is clear that the tendency for all the diseases included in the program (Diphtheria, Pertussis, Tetanus, Measles, Poliomyelitis and tuberculosis) is to decline over the last few years, due to the steady increase of immunization coverage. Table 1 shows the incidence of measles, pertussis, diphtheria and neonatal tetanus for the last two years. Polio cases caused by the wild virus have been reduced from over 500 in 1986 to only 17 in 1990. Between 1986 and 1990 there were around 1200 cases of Neonatal tetanus cases reported annually in the Americas, but surveillance for this disease is still rudimentary. However, all countries have identified those areas which are at highest risk for the disease, and control programs can now be directed to those areas. Measles shows a historical tendency to a declining incidence, but major epidemics still occur.

In spite of the achievements of the Phase I of this accelerated immunization program, much remains to be done to reach the goal of 90% coverage for each of these antigens during the next five years. There are still nearly four million children born every year in the Americas that do not get the full benefits of immunization. The proportion of children who do not complete, prior to their first birthdays, the immunization series of one dose of BCG (against tuberculosis), three doses each of polio and DPT (diphtheria, pertussis, and tetanus), and one dose of measles vaccine, which averages 25% for the Region, demonstrates this.

For those vaccines that require three doses, such as DPT and polio, regional coverage with the first dose is approximately 90%, but dropouts reduce coverage with all three doses to about 75% region-wide. The schedule of visits is made necessary by the technical limits of the vaccines; for example, the current measles vaccine is not effective prior to nine months of age, necessitating that the vaccination is delayed at least that long. A similar problem is indicated by the fact that up to 60% of newborns in the Americas may be susceptible to neonatal tetanus because only a small proportion of women in child-bearing age are being vaccinated with tetanus toxoid.

Coverage levels for the various EPI antigens, which reached over 75% for the region as a whole in 1990, still present major differences between countries and within countries as shown in Table 2. Furthermore, immunization of childbearing women with Tetanus Toxoid lags far behind the coverage achieved for childhood immunizations. This proposed project will place special attention on targeting areas which have low coverage or other special problems, as discussed below.

The problems of effectiveness and efficiency of immunization programs region-wide is indicated by the high proportion of contacts with immunization providers which are missed opportunities, estimated to be between 25% and 70%, depending on the country and district. A missed opportunity is an occasion when a woman of childbearing age or a child who is eligible for a vaccination has contact with an immunization service provider but is not vaccinated at that visit. Studies show that the most common reason for missed opportunities are misapplication of contraindications for vaccination, such as minor illnesses, by health workers. Some missed opportunities are the result of prenatal programs being administered separately from immunization programs. Missed opportunities will be addressed by improved norms for service delivery, training of health workers in their use, and supervision in their application; by better targeting of resources to areas with problems; and by increasing the sustainability of immunization services.

Geographic access to immunization services, such that all children in the Americas have the opportunity to receive immunizations according to the recommended schedule without undue hardship, will be improved by extending the cold chain, applying appropriate delivery strategies, and the training and supervision of health system personnel. Since immunization coverage is reported by vaccine dose and by county or district, this will be measured by the proportion of children and women in childbearing ages who receive initial doses of vaccine--that will show that a source of service is accessible to them.

Targeting services to the geographic and social groups most in need of additional immunization services is very important to increasing coverage levels. This can be achieved if resources are concentrated in the areas where there is the most need. For example, in the eleven countries with the worst neonatal tetanus problems, only 9% of the districts, with 21% of women of childbearing age, are at high risk; concentrating efforts there will yield impressive results. This will be accomplished by considering needs when the National Plans of Action and Country Annual Work Plans are made; districts with low coverage should be especially targeted to receive a substantial share of available resources, proportional to the size of the problem.

Another significant problem to be addressed is the current reliance on outside resources for much of the funding for immunization programs, and the lack of optimum involvement of public and private organizations in addition to the Ministry of Health in many countries. Through the coordinating and planning mechanisms of this Project, both of these problems can be alleviated, if not resolved, thereby significantly improving sustainability of immunization programs.

B. Immunization Programs in the Americas

In May, 1974 the World Health Assembly established the Expanded Program on Immunization, EPI, aimed at increasing immunization coverage throughout the world. In May, 1977, the World Health Assembly established as one of the objectives of the EPI the provision of immunization services to all children of the world, to decrease morbidity and mortality due to poliomyelitis, measles, diphtheria, tetanus, whooping cough and tuberculosis. In September, 1977, the Directing Council of the Pan American Health Organization established the EPI in the Americas, endorsing the resolutions of the World Health Assembly.

TABLE 1: INCIDENCE OF SELECTED DISEASES REGION OF THE AMERICAS, 1989-1990

SUBREGION AND COUNTRY	MEASLES		NEONATAL TETANUS		DIPHTHERIA		PERTUSSIS	
	1989	1990	1989	1990	1989	1990	1989	1990
ANDEAN REGION	28,330	24,071	557	426	124	45	5,693	4,255
Bolivia	778	984	104	55	11	4	705	155
Colombia	12,598	11,554	171	162	42	24	2,384	1622
Ecuador	3,649	1,673	58	88	3		256	487
Peru	1145	418	183	93	68	17	1,714	776
Venezuela	10,160	9,442	41	28	0		634	1215
SOUTHERN CONE	17,339	4,962	58	52	72	78	3,563	2,276
Argentina*	4,009	2,022	18	14	20	31	2,943	1974
Chile	13,090	1,846	3	0	44	37	209	63
Paraguay	220	984	37	38	8	10	371	78
Uruguay	20	110	0	0	0	0	40	161
BRAZIL	22,889	50,440	392	386	804	733	13,804	13,973
CENTRAL AMERICA	26,028	37,845	185	134	10	2	623	813
Belize	11	70	0	0	0	0	1	0
Costa Rica	33	81	0	0	0	0	85	75
El Salvador	16,536	1,112	28	25	0	0	46	211
Guatemala	2,413	8,802	113	50	10	2	145	138
Honduras	6,353	8,360	20	39	0	0	78	147
Nicaragua	381	17,529	17	15	0	0	226	220
Panama	301	1,891	7	5	0		42	22
MEXICO	20,381	64,571	87	123	6	0	1,978	794
LATIN CARIBBEAN	2,097	4,908	166	155	38	27	2,160	1,162
Cuba	12	17	0	0	0	0	70	22
Haiti	580	1414	153	143	2	0	1835	913
Dominican Republic	1,505	3,477	13	12	36	27	255	227
LATIN AMERICA	117,064	186,797	1,445	1,276	1,054	885	27,821	23,273
ENGLISH CARIBBEAN	8183	4500	0	0	1	0	22	21
Anguilla	7	15	0	0	0	0	0	0
Antigua	0	0	0	0	0	0	0	0
Bahamas	56	65	0	0	0	0	0	0
Barbados	2	51	0	0	0	0	0	3
Cayman	5	0	0	0	0	0	0	0
Dominica	9	13	0	0	0	0	0	0
Grenada	2	5	0	0	0	0	0	0
Guyana	11	1	0	0	0	0	0	1
Jamaica	5788	3651	0	0	1	0	0	3
Montserrat	1	0	0	0	0	0	0	0
St. Kitts & Nevis	12	80	0	0	0	0	0	0
St. Lucia	10	30	0	0	0	0	0	7
St. Vincent & Grenadines	1	1	0	0	0	0	15	0
Suriname	0	35	0	0	0	0	0	0
Trinidad & Tobago	2170	550	0	0	0	0	7	7
Turks & Caicos	0	2	0	0	0	0	0	0
British Virgin Isl.	109	1	0	0	0	0	0	0
NORTH AMERICA	29,333	27,404	0	0	3	11	5,790	8,963
Bermuda	1	1	0	0	0	0	1	0
Canada*	11,139	876	---	---	3	7	1,759	4,775
USA*	18,193	26,527	---	---	0	4	4,030	4,188
TOTAL	154,580	218,701	1,445	1,276	1,058	896	33,633	32,257

--- Data not available

* Country which does not report cases of neonatal tetanus separately

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TABLE 2: VACCINE COVERAGE IN THE REGION OF THE AMERICAS, 1989-1990

REGION & COUNTRY	POPULATION (less than 1 year)		OPV3 %		DPT3 %		MEASLES %		BCG %	
	89	90	89	90	89	90	89	90	89	90
ANDEAN REGION	2,456,562	2,363,278	69	76	60	71	55	67	72	79
Bolivia	261,582	221,956	49	50	39	41	47	53	28	48
Colombia	669,809	685,108	90	93	78	87	64	82	94	95
Ecuador	316,622	320,852	64	67	55	68	57	61	91	88
Peru	670,000	600,904	60	73	58	72	52	64	62	83
Venezuela	538,549	534,458	67	72	55	63	50	62	68	63
BRAZIL*	4,307,582	3,610,961	97	93	54	81	58	78	70	78
CENTRAL AMERICA	989,404	1,016,513	71	80	65	74	69	78	59	70
Belize	6,701	7,200	71	80	71	84	68	81	87	80
Costa Rica	82,451	82,500	87	95	87	95	78	90	90	92
El Salvador	182,173	186,267	64	76	64	76	73	75	63	60
Guatemala	339,385	349,847	58	74	50	66	54	68	21	62
Honduras	174,262	180,721	86	87	85	84	94	90	80	71
Nicaragua	143,200	148,085	85	86	66	65	63	82	92	81
Panama	61,232	61,893	72	86	70	86	73	99	87	97
SOUTHERN CONE	1,144,876	1,090,660	83	90	82	88	85	92	88	98
Argentina	677,398	602,288	86	89	80	85	89	95	92	99
Chile	279,150	293,556	95	99	95	99	91	98	95	97
Paraguay *	134,928	138,802	41	76	61	78	53	69	53	90
Uruguay	53,400	56,014	88	88	88	88	82	82	99	99
LATIN CARIBBEAN	606,619	616,560	71	74	61	67	56	73	57	79
Cuba *	187,529	186,658	95	94	95	92	97	94	97	98
Haiti	201,707	207,637	50	40	50	41	31	31	40	72
Dominican Rep.*	217,383	222,265	70	90	43	69	43	96	38	68
MEXICO	2,579,200	1,970,515	96	96	65	66	85	78	80	70
LATIN AMERICA	12,084,243	10,668,487	86	87	62	75	66	77	73	78
ENGLISH CARIBBEAN	131,672	134,637	82	86	82	86	72	75	61	62
Anguilla	157	200	99	99	99	99	92	99	99	99
Antigua	1,088	1,114	99	99	99	99	95	89	-	-
Bahamas	5,641	6,013	82	82	86	86	87	87	-	-
Barbados	4,032	4,040	80	90	78	91	85	87	-	-
Cayman Islands	378	434	93	99	93	99	89	89	81	81
Dominica	1,715	1,745	94	94	92	94	88	88	99	99
Grenada	2,613	2,650	86	69	87	80	89	85	-	-
Guyana	17,658	18,500	79	79	77	83	69	73	76	85
Jamaica	57,487	59,104	84	87	85	86	71	74	99	98
Montserrat	199	154	93	99	93	99	89	99	60	99
St. Kitts & Nevis	924	980	99	99	99	99	90	99	...	...
St. Lucia	3,530	4,380	93	90	92	89	91	82	99	94
St. Vincent	2,482	2,505	97	92	98	98	99	96	99	99
Suriname	10,000	9,000	71	81	72	83	73	65	-	-
Trinidad & Tobago	23,280	23,280	77	87	77	82	59	70	-	-
Turks & Caicos Isl.	250	300	89	98	89	97	76	81	99	99
British Virgin Isl.	238	238	97	99	99	99	87	99	99	99
NORTH AMERICA	3,998,895	4,009,883	—	—	—	—	—	—	—	—
Bermuda	895	883	76	62	74	62	67	63	-	-
Canada	358,000	362,000	...	...	...	...	...	...	...	...
USA	3,640,000	3,647,000	...	...	...	...	...	...	...	...
TOTAL**	16,214,810	14,813,007	86	87	62	76	66	77	73	78

— Vaccine not in use
... No data available
Source: PAHO (Provisional data)

Coverage calculated with two doses of OPV
TOTAL coverage does not include North America

The EPI in the Americas was launched in early 1978, emphasizing the training of immunization managers, the organization of logistical and cold chain systems and mechanisms to facilitate vaccine purchase through the establishment a Revolving Fund for vaccine procurement. Immunization coverage, which was then around 15 to 20% started increasing steadily, reaching the level of around 45 to 50% by the end of 1984.

In May, 1985, the Director of PAHO proposed that poliomyelitis be eradicated from the Americas by 1990 and this proposal was endorsed by the Directing Council of PAHO in September of 1985. The EPI goals were then enhanced with the inclusion of this target, which was viewed as a springboard for strengthening of surveillance and information systems critical to disease control and further increase of immunization coverage to all EPI vaccines.

Several agencies, including the USAID, rallied support around these objectives and a Phase I program was launched in 1986, with the goal of strengthening and accelerating the EPI in the Region and its objective of improved child survival, including the eradication of indigenous transmission of wild polio virus and thus the eradication of poliomyelitis in the Americas by 1990.

The initial effort was accomplished through a multi-agency funded program which was based on a Plan of Action elaborated by PAHO, under the guidance of a Technical Advisory Group appointed by the PAHO Director in consultation with the other agencies. To implement and follow up this Plan of Action, an Interagency Coordinating Committee was formed, with representatives of PAHO, AID, UNICEF, the Inter-American Development Bank (IDB), Rotary International and the Canadian Public Health Association.

An important feature of this mechanism was that the agencies kept their identity in the planning and implementation, and the lines of funding were clearly identified by agency, even when funds were channeled through PAHO. It was thus possible to identify all the USAID contribution of US $22.2 million through PAHO from both regional and mission-funded projects, and another approximately US $20.5 million in USAID funds through country mission project grantees.

The total inputs of Phase I were on the order of US $544 million, with US $430.0 million coming from recipient country resources and US $114 million from donors, with the following breakdown:

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PAHO	
Regular budget	$5.7 million
USAID(incl buy-ins)	22.2
IDB Grant	5.5
CPHA Grant	1.4
Rotary Grant	1.2
AID bilateral	20.5
UNICEF	30.1
Rotary	27.4
Donor Total	$ 114.0
Country Funds	$ 430.0
PROGRAM TOTAL	$ 544.0

The initial pledges of UNICEF and Rotary were US $10.0 million each. The success of the project helped those two organizations to mobilize additional funds.

With the preparation of the National Plans of Action during the Phase I program, it was possible to plan for the inputs of host governments, which were in the order of US $430.0 million for the period 1986-1991. Overall, those plans have been met.

It is expected that Phase II will have a similar level of commitment, based on recent resolutions of the PAHO governing bodies, particularly Resolution X of the Pan American Sanitary Conference that met in Washington, D.C., in September, 1990 (Annexed). In addition, it will be possible to attribute the resources of non-governmental organizations (NGOs) which contribute to country programs more accurately during Phase II, due to expanded participation on the ICCs and better reporting and tracking of expenditures by the ICCs.

The first grant funds from USAID and IDB made available to PAHO were disbursed in April, 1987. By the end of 1990, only <u>three and half</u> years after the inception of Phase I, immunization coverage reached an all-time high in the Americas, with over 75% region-wide for each of the EPI vaccines; polio is nearly eradicated with only fourteen cases confirmed for 1990; areas at high risk for neonatal tetanus were identified in all countries of the Americas; and the epidemiology of measles is better known today than it was four years ago. Several operational studies both on the epidemiology of the EPI diseases as well as on the issues related to missed opportunities for vaccination helped increase knowledge on the strategies to further control of these diseases.

All these gains are the product of the over ten years of implementation of EPI in the Americas, boosted by the Accelerated Immunization Phase I project efforts, which strengthened surveillance and information systems, as well as the overall logistics and management of immunization programs in the Americas.

C. Pan American Health Organization

The Pan American Health Organization (PAHO) is the oldest multilateral health organization in the world, created in 1902 to help improve the health of the peoples of the Americas. Since 1948, PAHO has been the Regional Office of the World Health Organization for the Americas. PAHO has 38 member countries and participating governments with its Headquarters in Washington, D.C., USA, and has a country office with technical and administrative staff located in every Latin American country, and in the majority of the countries and territories of the English-speaking Caribbean.

The policies, priority health programs, and program budget for PAHO are discussed and approved by its governing bodies: the Executive Committee, composed of nine representatives elected by the PAHO Directing Council, which is composed of representatives of the governments of every member country. The Executive Committee meets twice a year and the Directing Council meets once a year. Every fourth year, the Directing Council functions as the Pan American Sanitary Conference, which sets policy and elects its Director.

The Organization provides technical cooperation and expertise to member countries in all aspects of health. Historically, countries of the Americas have assigned high priority to disease control and immunization. Smallpox was eradicated first in the WHO Region of the Americas; poliomyelitis is almost eradicated in the Americas.

PAHO was the lead agency in the development and implementation of the regional immunization Program, Phase I, 1986-1990, and served as the Secretariat for both the EPI Technical Advisory Group (TAG) and the Inter-Agency Coordinating Committee (ICC).

The 1990 Pan American Sanitary Conference has also approved the strategic orientations and program priorities for the period 1991-1994, which include the strengthening and developing of local health services, and focusing action on high risk groups. This Accelerated Immunization Phase II Project, will be an integral part of these overall objectives and of national health plans.

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III. PROJECT PURPOSE AND DESCRIPTION

A. Project Goal and Purpose

The sector goal to which this project will contribute is to reduce infant and childhood mortality and morbidity rates from vaccine-preventable diseases such as poliomyelitis, measles, diphtheria, tetanus, pertussis (whooping cough), and tuberculosis. Special emphasis will be placed on controlling measles and eliminating neonatal tetanus during this five year project period. By the end of the project, it is expected that the eradication of poliomyelitis from the Americas will have been confirmed by an independent International Certification Commission, that neonatal tetanus will have been eliminated from the Americas, and that measles will have been eliminated from the English-speaking Caribbean countries and ceased to be a highly endemic and epidemic disease in other areas (a reduction of at least 50% over present levels).

This goal will be achieved by increasing complete immunization coverage among children under one year old and women of childbearing age; this will be indicated by reaching levels above 90% of each antigen (one dose of measles and BCG vaccines, three doses of DPT and OPV (oral polio vaccine) before children reach age one throughout the Americas, and two doses of tetanus toxoid for 80% women in childbearing ages in the areas at high risk for neonatal tetanus, by the end of the Accelerated Immunization Phase II Project.

In addition to continuing coverage for population groups already reached by previous efforts, this proposed project will orient its efforts to reach the remaining 30-40% of the population who remain outside the reach of both special immunization campaigns and routine and intensified health services. That population is comprised of those who reside in areas with the lowest coverage rates and where disease outbreaks are occurring. They are at highest risk for all health-threatening conditions, and are found generally in marginal urban areas and geographically inaccessible areas which are also isolated from the economic mainstream of the countries.

The project purpose is to contribute to improvement of the effectiveness and efficiency of immunization delivery in the region, which will build upon the gains of Phase I of the regional program (1986-1990), which included AID's Accelerated Immunization Phase I project. Improvement in efficiency of immunization services will be indicated by a reduction in missed opportunities (ie. a child visits a health facility for another purpose and is not vaccinated while there). Missed opportunities to vaccinate still pose a major obstacle to increasing coverage. In many countries of the Americas, between 25% and 70% of visits to health facilities by eligible individuals do not result in immunization.

Increased effectiveness will be indicated by improved geographic access to services, as indicated by DPT-1 and OPV-1 coverage rates by county or district, of which there are about 14,000 in the region, each reporting coverage individually.

B. Project Description

The Immunization Strategy being followed by PAHO includes five guiding principles:

- A primary target group of children under one year of age and women of childbearing age;
- Development and monitoring of country-specific plans and budgets coordinated with other donors;
- Major focus on target countries (those with higher disease burdens and/or lower coverage) so as to maximize health benefits that can be obtained with available resources;
- Emphasis on institutional capacity development to sustain routine host country immunization service delivery; and
- Continued operational research on immunization technology improvements and health service delivery.

This project will provide resources for PAHO to assist national programs and sub-regional laboratories in order to improve the effectiveness and efficiency of immunization services in Latin America and the Caribbean. In addition to the resources of this project, PAHO will seek resources from other donors, many of which have contributed to Phase I, for support of other activities related to the regional immunization program. In some cases, these resources are donated to PAHO; in others, directly to one or more countries.

1. Outputs

The activities of this project will result in the following outputs, which will be measured according to objectively verifiable indicators as discussed in section VII, Project Design Summary:

- improved norms, training, and supervision regarding immunization and surveillance for neonatal tetanus and measles, and regarding missed opportunities to vaccinate, indicated by the development of new country-specific manuals, and training and supervision plans in Country Annual Work Plans and monitoring of the training and supervision carried out by the national program manager and the ICCs;

- improved national targeting of immunization programs to problem areas, indicated by analysis and plans described in country annual plans for immunization programs; and

improved sustainability of national immunization programs, indicated by increased use of national funds for recurrent costs, and participation by a wider range of institutions (public and private) in immunization delivery.

Phase I began to assist country ICCs to quantify the recurrent costs associated with national immunization programs. This has provided the political leverage necessary for Ministries of Health to better engage in policy dialogue with their governments concerning the importance of obtaining the necessary recurrent cost financing. Moreover, the cost savings attributed to polio disease reduction begun to convince political and financial decision-makers of the cost-benefit of financing recurrent immunization costs. Baseline figures from Phase I will be used as the starting point for comparison of this indicator.

It may be, however, that certain countries at the end of Phase II will still not be in a position to cover all recurrent immunization costs. This will be evident in their annual work plans, where the cost associated with recurring activities will not be covered by national funds. In these cases, donors will be asked to cover a portion of the national recurrent costs until such time that these governments are in a position to finance them.

Similarly, the ICCs in some countries in the region already include private sector participants, such as the local Rotary Clubs and other NGOs in national immunization programs. During this Project, national program managers will be encouraged to continue this practice, and broaden participation to represent all those elements in each country which contribute to the program. This participation will be monitored by means of the minutes to be produced by each ICC meeting.

2. Activities

The mechanisms which the project will use to achieve the above-described outputs are varied; most of the activities, or inputs, affect more than one of the outputs. In all cases, special attention will be paid to the six latin american and caribbean (LAC) child survival emphasis countries (Bolivia, Ecuador, Peru, Haiti, Guatemala, and Honduras), as well as Nicaragua, the Dominican Republic, and El Salvador. Activities which are proposed to receive assistance through this Project are described below.

a. Personnel for Technical Assistance and Coordination

To assist in the implementation and management of country activities, PAHO will make available its regional, sub-regional, and country technical staff and expert consultants.

AID funds from this project will pay salaries and benefits for: three epidemiologists stationed in Washington (one each for polio, measles, and neonatal tetanus--the latter two will be additional to the one funded under Phase I), two sub-regional epidemiologists (Guatemala and Haiti), a project administrative officer, and a computer programmer and expert consultants as may be required. The epidemiologist stationed in Haiti will cover Haiti (60% of time) and Dominican Republic (40% of time); the epidemiologist posted in Guatemala will cover Central American countries (Distribution of time: Guatemala 25%, Nicaragua 20%, El Salvador 20%, and Honduras 20%, and Panama, and Costa Rica 15%). These two AID funded positions complement the other six PAHO funded positions, posted in Brazil, Peru, Colombia, Mexico, Bolivia and Trinidad, respectively. Bolivia will continue to be covered by the PAHO epidemiologist 70% of the time and Ecuador will receive 20% of time of the epidemiologist posted in Colombia. The epidemiologist posted in Central America will be aided by two international consultants (posted in El Salvador and Nicaragua, respectively) and by national consultant epidemiologists locally recruited, at least one for El Salvador, Honduras, Guatemala and Nicaragua, respectively.

The location for the positioning of the intercountry or sub-regional epidemiologists and their geographic responsibilities is shown in Figure 1, Organizational Chart. The choosing of the host country was based on the complexity of problems, both epidemiological and administrative, in comparison with the other countries under his responsibilities and other logistical reasons, such as accessibility and ease of administrative support from the PAHO country office.

The two additional epidemiologists at Central Level are needed to assist in the coordination of activities related to epidemiological surveillance, outbreak investigation, immunization strategy design, and provision of supervisory assistance to the sub-regional advisors in measles and neonatal tetanus, in addition to the epidemiologist concerned with polio who is proposed to continue his work as part of Phase II. Wherever possible, epidemiologists chosen for these positions will also have program management experience.

The two AID-funded inter-country or sub-regional epidemiologists form part of a regional network of eight advisors funded by PAHO and AID who will, for their assigned countries, assist and cooperate with the national immunization program manager and the ICC in assessing needs for special interventions, participate in the investigation teams' classification visits, and provide direct technical assistance. These advisors will assist the Ministries of Health and the ICCs with the planning and implementation of immunization program activities. The sub-regional personnel will work closely with counterparts in the Ministry of Health (MOH) and other members of the Interagency Coordinating Committee (ICC) for EPI and particularly their counterparts in USAID.

A major objective of these advisors will be the strengthening of the surveillance activities in the countries in order to target services to problem areas to impact on coverage, disease, and ultimately, to reduce deaths. It is the role of these advisors to provide advice and to influence national program managers to make the best choices, not to direct the programs themselves.

In addition to the network of inter-country or sub-regional epidemiologists, the placement of PAHO-funded country epidemiologists/technical advisors (generally a host country national) in selected countries will assist the national immunization program managers with the planning and implementation of the Phase II activities. They will work closely with counterparts in the MOH and other entities, public and private, participating in the national immunization program. These full-time persons are responsible for all surveillance activities of the program; monitoring adequate EPI vaccine coverage at the municipality level; case and outbreak investigation; appropriate record-keeping systems; and "mop-up" activities in those areas or districts that are still at risk to wild poliovirus transmission.

During Phase I, eleven such national posts were established and filled. Countries were selected for placement of the country epidemiologists or technical advisors based on the problems of administrative complexity in developing sustainable immunization services, on vaccination coverage rates, and on epidemiologic significance of national control efforts. Additional country epidemiologists will be contracted where needed in high risk areas for neonatal tetanus and some of the larger Caribbean islands, using PAHO funds in the Accelerated Immunization Phase II project. During this Project, PAHO will work with national immunization managers to develop plans for absorption of this cadre within national budgets for immunization programs, if they will be needed beyond this intensive phase of the program. In some other cases, they may become permanent PAHO staff, working in other countries of the region.

The AID-financed project administrative officer will continue to assist in the planning, management and implementation of the project, including its budgetary and financial aspects.

An increase in data collection and processing due to the addition of neonatal tetanus and measles will require additional statistical support staff. An AID-financed computer programmer will work to improve the software available to the field for the epidemiologic surveillance and program information systems.

In addition to the regional, inter-country or sub-regional, and country personnel provided by this Project, there is a need for support personnel to be available to the EPI program office at the Regional level. This will include virologists (with extensive laboratory skills) to assist in the development of the laboratory

network in the Region (including training, supervision, supplies and quality control). Consultants will be provided using funds from other donors whenever possible.

b. Epidemiologic Surveillance and Management Information Systems

An extremely important benefit resulting from Phase II will be improved information systems for epidemiologic surveillance and immunization program management. By the end of Phase II, the national and local health care delivery authorities in all countries should have improved their capacities to collect, analyze, and interpret both program and epidemiologic information in order to provide guidance for targeting program activities to high risk groups or locations. Procurement of computers and software, training of personnel, maintenance of equipment, and updating of software will contribute to improving information systems during this Project.

To this end, equipment will be purchased for those countries that do not yet have it and existing equipment may be upgraded, if necessary. Modifications and adjustments will be made to the existing systems: the Polio Eradication Surveillance system (PESS) and the EPI Information System (EPISYS). Both systems are presently installed in the EPI Offices of the Ministries of health of thirteen countries (Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Paraguay, Peru and Venezuela). The systems have been designed to contain all the basic elements of surveillance at the local level, EPISYS includes population, vaccine coverage, morbidity and mortality data at the lowest available level in the country. A module on vaccine stocks will be added in the first year of this Phase II Project. These data will be uploaded from countries to PAHO/Washington, on a periodic basis. Work in Phase II will include upgrading and modifying these systems and providing hardware and software support at the country level. There will also be the development of two new systems: measles and tetanus surveillance and the installation of all the systems in the countries that do not yet have them. This will be followed up by in-service training.

During Phase I, each country developed and improved its epidemiological capabilities for case investigation and control. Countries became more able to rapidly respond to reports of suspected cases, and implement the necessary control measures. Since this system was integrated with the overall national surveillance systems, it was possible to better understand the epidemiology of neonatal tetanus and measles, setting the state for Phase II of this project. In this new phase, the system will continue to be integrated with the overall national information systems and hopefully will reinforce the information regarding other aspects of child health.

The enhanced disease surveillance for poliomyelitis resulted in the gain of knowledge regarding other flaccid paralysis that affect children below 15 years of age. Before the polio eradication effort, for example, it was thought that Guillain-Barre Syndrome (GBS) did not have a high morbidity in children below 15 years of age. Now, it is known that GBS can account for large number of cases of flaccid paralysis. Furthermore, many of the national disease surveillance systems in the LAC countries benefitted from geographic expansion as a direct benefit of polio eradication efforts. For the first time, many populations came in contact with the health system because of disease surveillance efforts.

Phase II of the Accelerated Immunization Project will be tailored to the needs of the local level of the health systems, to allow action as close as possible to where the problems are. It will build upon the polio surveillance efforts by improving the systems of each Ministry of Health to investigate and respond to disease outbreaks, with special attention to measles and neonatal tetanus, in addition to polio, as early as possible. In the Caribbean, the first two years of this effort will be to better define the epidemiology of three of the target diseases there: measles, mumps and rubella. The information gained from each investigation can then be analyzed and used in the decision-making process to alter program activities or change program strategies.

Through this project, PAHO will ensure that program personnel or expert consultants are available to help strengthen epidemiological surveillance in the Caribbean sub-region. These personnel will be made available to assist countries in developing or improving surveillance activities in all countries, and to review case records of other diseases included in the differential diagnosis of measles, such as dengue, rubella and roseola.

For individual countries, computer hardware and software will be purchased to complete the laboratory network and overall immunization information system, their management information system and to establish for the English-speaking Caribbean countries a system for surveillance of measles, mumps and rubella. Purchase of hardware and software should take into consideration their compatibility with those used by other sub-systems, to ensure their integration and coordination. These computers will permit project managers to monitor progress of the program which will improve the decision-making process and feed back to field staff.

The regional EPI weekly bulletin on surveillance of flaccid paralysis will continue to be published, and each issue of the EPI Newsletter will contain sections concerning polio eradication efforts, measles elimination, and neonatal tetanus control. Periodic reviews of the literature on EPI diseases will be distributed by PAHO throughout the sub-region.

In addition, translations into Spanish and distribution by PAHO of the most relevant publications about immunization surveillance will be expanded.

All countries will be given the necessary resources to publish their existing national EPI bulletins monthly, inviting all health sector entities to participate in this publication. They will be encouraged to include a section on measles, neonatal tetanus, and flaccid paralysis in each edition. For the Caribbean region, as a step to reinforce surveillance of "rash illnesses", the PAHO Caribbean Epidemiology Center (CAREC) will include in its bi-monthly bulletin a section on the measles elimination program in the Caribbean. Health facilities throughout the Caribbean receive this publication.

c. Meetings

AID funds from this Project will support meetings critical to the implementation and coordination of regional and country immunization programs as described below. Other meetings which are part of the project, but funded by PAHO or cooperating countries are described in the Coordination section of the proposal, below.

1. Technical Advisory Group

At the regional level, PAHO will convene a Technical Advisory Group (TAG) meeting annually for advising PAHO on norms, guidelines, and procedures for implementation of the program. (See section IV. B. 2. b, "Technical Advisory Group"); Annex 1 is the list of the current membership of the group, which is to remain the same, as well as the list of all attenders at the Ninth meeting.

2. Sub-Regional Meetings of National Immunization Program Managers

To maintain momentum and to facilitate communication in the Region, EPI managers' meetings for the English-speaking Caribbean will continue to be held annually. Additionally, to increase involvement of the personnel from the field, meetings will continue to be organized once a year for the Southern Cone and Brazil, Central America and Mexico, and the Andean sub-regions.

These meetings will serve as a fora for mutual assistance and information dissemination and will also be attended by technical experts to aid in the resolution of problems encountered. USAID health officers will continue to be invited to participate at these meetings. The meetings will consist of country presentations, discussions related to issues raised during the country presentations, and presentations of updates in the field.

Outputs of the meetings will include recommendations of the working groups to the countries on strategies to resolve the problems encountered. Findings and recommendations of the meetings will be published and disseminated in the region or sub-region.

d. Laboratories

There will be continued emphasis on the laboratory element of this Project, in order to maintain a network of regional laboratories for providing diagnostic services to the countries for analysis of specimens, and for further monitoring of the cold chain systems throughout the region. Using AID Project funds, key items of equipment, supplies and reagents will be provided to the regional and national laboratories.

Based on a review (described below in section IV. B. 2. d.) of the nine Regional Reference Laboratories established during Phase I and other laboratories which might be candidates for such a role in the Project, as well as the recommendations of the Consultative Group on Polio Certification, PAHO will select laboratories which will be added to the regional network. Selection will be made based on geographic distribution, physical infrastructure and existing equipment, the level of training of personnel employed, and government or other institutional support for supplies and personnel. For example, it is expected that one new laboratory in the Caribbean will be included to support the measles elimination initiative there.

The Project will expand and improve diagnostic capabilities to support surveillance of poliomyelitis by the transfer of both traditional and newer diagnostic techniques, such as probes of Desoxi-Nucleic Acid (DNA), Polymerase Chain Reaction (PCR) and sequencing of viral genome. This includes equipment, and if needed, supplies for this intensive phase of the regional immunization program.

Special emphasis will be placed on improving the transport of specimens from suspected polio cases both within countries and to the regional reference laboratories. A continual supply of standardized reagents for the serologic studies will be provided to the regional reference laboratories by the Project. The reference laboratories will confirm the results of the country laboratories. For countries without laboratories, the designated reference laboratories will continue to assist. The reference laboratories will assist countries to develop in-country capacity for virologic diagnosis. A regional laboratory supervisory system will guarantee consistent, high quality testing and reliability of results.

For the English speaking Caribbean, standardization of available serologic diagnosis tests for measles will be sought. Meanwhile, continuous development of better serologic tests will be supported

with PAHO and other funds, and monitored with the help of institutions in member countries.

In addition to the laboratory studies related to disease surveillance, there is a need to support potency testing of vaccines, as a check on the quality of the cold chain, both internationally and within countries. This will be done at the regional reference laboratories.

For the measles elimination program in the English speaking Caribbean, a major component of surveillance activities will be laboratory confirmation of probable cases. All probable cases will have specimens collected for serological studies. The identified laboratories in the sub-region for serological confirmation are those at CAREC, in Trinidad (already in the network) and at the University of the West Indies (UWI), in Jamaica (which will be considered to be added). The close participation of the laboratories in the epidemiological evaluation process is imperative.

The Caribbean Epidemiology Center (CAREC) in Port of Spain, Trinidad, the Centers for Disease Control (CDC) in Atlanta,Georgia, USA, the Osvaldo Cruz Foundation (FIOCRUZ) in Rio de Janeiro, Brazil, and the Laboratory Center for Disease Control (LCDC) in Ottawa, Canada will be requested to assist in the development of the laboratory network by providing training at no charge and to certify laboratories as reference centers. Training fee for tuition has proved to be available in adequate quantities during Phase I and is budgeted for Phase II, under training. On the job training, through exchange visits of scientists between laboratories will continue as in Phase I.

As part of the development of the laboratory network for measles elimination, a manual will be produced by PAHO, covering: tests to be performed on all suspected cases, testing procedures, appropriate specimens, methods of collection of specimens, shipping procedures, handling of specimens, quality control procedures, data collection and data processing. This manual will be distributed to all participating laboratories. Collection and transport standards will be included in the field guides discussed below.

e. Training

The objective of training in Phase II will be to assure that the local level (state or provincial) strengthens its institutional capacity to sustain immunization service delivery. About ten regional-level courses per year will be funded with AID support during Phase II. The regional project will not assume the costs of national training for health workers and supervisors, which is expected to be programmed in each country annual workplan. Instead, regional training will transfer new technologies and procedures for diffusion throughout the region.

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There will be a major emphasis on training personnel in the additional components of program operations critical for success. To assist in training activities, PAHO will prepare two field guides for national program managers: one on the technical basis of measles elimination and one on the technical basis of neonatal tetanus elimination. These field guides will serve as a prototype for countries to produce country-specific manuals adapted to local conditions for service delivery personnel. An important emphasis in these new manuals will be appropriate norms and procedures to eliminate missed opportunities to vaccinate. PAHO will provide technical assistance to the countries for the adaptation of the manuals and for its production and distribution, as well as for the planning and execution of the training courses needed at sub-regional level and in countries.

Health and immunization managers will then be trained in all aspects of program design, implementation, monitoring and evaluation in connection with the strategy of decentralization of health services. A very important component will be management technologies, including micro computer skills, from innovative business management techniques to traditional public health approaches. The emphasis on the training of a cadre of health managers and supervisors will stress the need for the planning of services and organization of the delivery systems in a way that focuses on the need of the groups at highest risk, both epidemiologically as well as geographically by applying the proper mix of strategies to increase the effectiveness of services, especially by reducing missed opportunities.

To ensure that the Ministries of Health sustain their efforts to provide immunization services to these high risk groups, Phase II will promote training of health workers in how to maintain access (contact and provision of information) to the group in the highest risk. This effort will complement the health educational messages to be provided to parents and women in particular. The major strategy to be used by country programs will be on the job training which would respond to problems detected through effective monitoring and supervision. As was shown in Phase I of the PAHO program, the training of local level workers permitted the local level worker to detect cases of flaccid paralysis and to institute rapid control measures in a small geographic area. For Neonatal Tetanus elimination, in the areas already identified as high risk, special emphasis will be given on technical assistance for demonstration projects on training traditional birth attendants in the application of tetanus toxoid (TT) vaccine, surveillance, and the improvement of delivery care.
Large scale training of traditional birth attendants is expected to be financed in coordination with other maternal and child health programs both regionally as well as nationally.

f. Mobilization for Supervision, Surveillance, and Outbreak Control

The basis of a proper surveillance system is the immediate investigation of cases. This is one of the most critical components of disease control. For this purpose, adequate means of communication and transport facilities have to be provided as well as subsistence allowances. Once a case of a target disease is identified, prompt control action is needed which requires administrative decentralization of the decision-making process and of access to funds. The Project will provide AID funds for travel by regional and sub-regional staff to assist countries to implement adequate surveillance measures. In addition, funds will be provided to countries to strengthen mobilization for surveillance, especially in high risk areas. During the course of the project, host countries will be encouraged to gradually absorb some recurrent local costs, including these. This is more likely due to encouragement, technical cooperation from project staff, and improved monitoring and control of costs.

g. Cold Chain and Logistics

During the Phase I, PAHO developed a methodology for cold chain review and evaluation. These reviews have been very useful to identify constraints in the logistics and cold chain in several countries and served as baseline for the procurement of adequate equipment and maintenance practices. Such reviews will be continued in response to problems during this Project. Donor personnel may participate in some of these reviews, as determined to be locally appropriate by the ICCs.

As part of the routine monitoring of the quality of the cold chain, deficiencies will be identified and the plans of action will reflect the actions to be taken. To address the recognized problems with cold chain equipment maintenance, countries will be encouraged to design cold chain systems that rely upon low maintenance equipment, and to conduct training courses in operation and maintenance of equipment. Technical assistance from PAHO personnel and consultants will assist country programs with these activities.

The need for MOHs to coordinate with private vaccination providers such as NGOs will be emphasized through the ICCs. Project personnel will assist the MOHs and country ICCs to identify and resolve problems in logistics and training regarding cold chain equipment and supplies. Mobilization for maintenance personnel and workshops for equipment repair will continue to be national responsibilities, since these are recurrent cost items.

Purchasing of cold chain equipment is backstopped by quality control measures adopted for products available worldwide. To ensure the proper functioning, storage and transport of vaccines,

manufacturers in the region and elsewhere are requested to have their equipment tested through standardized procedures in an approved laboratory established by PAHO in collaboration with the Valle University in Cali, Colombia. Equipment which successfully meets predetermined standards are then published in the annual Product Information Sheet (PIS) for the global EPI. Project funds will only be used to purchase equipment shown in the PIS.

h. Research

Recognizing that questions remain to be addressed in the field of measles and neonatal tetanus elimination, both in technical and operational areas, support for such research will be provided. It is also recognized that questions will continue to arise, even as some problems tackled as part of the Phase I research agenda are solved. Based on proposals for research protocols developed at the semi-annual meetings of the EPI Research and Development Group in Geneva, the Technical Advisory Group will review ongoing activities and advise PAHO personnel regarding which areas of research are of high priority for implementation of Phase II of the Project. This will include identification of funding sources for grants and review of protocols. In addition, country ICCs can request research funds to study operational problems and find solutions. Sub-regional or country project staff would help ICCs to develop proposals for presentation to the regional office. In the nine AID emphasis countries studies will be performed in the initial two years of the project to identify the recurrent and capital costs of achieving and sustaining 90% coverage by the end of the project. This information can be used for development or modification of five-year National Plans of Action to move the programs towards sustainability of programs. Both the regional office and sub-regional epidemiologists will work with MOHs and ICCs member agencies to coordinate such activities. It is expected that research funded by this Project will be entirely operational. For example, research will be expanded to contribute to the certification of the eradication of the transmission of the wild polio virus in the Americas. Research will be coordinated with other institutions or agencies involved in health care or social sciences research, as appropriate.

The mechanisms to initiate research once areas have been identified will be facilitated by PAHO/WHO. Preference will be given to spreading the implementation of research widely, enabling all member nations to have some research in their countries, as they are able. All Project funded research will be part of the research agenda of both the Research and Development Group of the global EPI and of the PAHO Technical Advisory Group. Protocols will be reviewed by members of the TAG in an ad-hoc basis before funds are granted.

Operations research, wherein some element of service delivery is modified and results measured, will be conducted to determine methods of incorporating the private sector in immunization delivery and surveillance activities and to address issues impeding efficient, effective immunization service delivery. For example, optimum combinations of immunization services, based in health facilities, communities, or campaigns, will be studied. This is especially important in the English speaking Caribbean, as the private sector is a significant provider of health care in many of the countries. Results of the research conducted under this program will be widely disseminated throughout the Region, in national and international meetings and congresses, and through WHO will be disseminated to other WHO regions. These results, whenever applicable, will be submitted to refereed scientific journals.

i. Evaluation and Certification Commission

Recognizing the critical nature of evaluation for monitoring success and detecting and resolving problems, there will be increased emphasis on the evaluation component compared to Phase I. International observers will participate in all country evaluations and reports of findings will be widely distributed. Because of the difficulties inherent in routine information systems, local area coverage surveys may be performed in some countries. Questions will be included on reasons for compliance and non-compliance. Knowledge, attitude and practice (KAP) studies related to vaccine-preventable diseases and prevention will be part of some of these studies. Results of these surveys will be used as a basis for modifications of strategies to optimize the efficacy and efficiency of immunization delivery.

In addition to evaluations of country program operations, the laboratory network will be evaluated periodically to guarantee that the high level of support needed is met. Part of the laboratory evaluation process will include a retesting of original specimens by the reference laboratories, as well as testing reference specimens in the country laboratories. The reference laboratories will also be used to test the efficacy of the cold chain, especially when there is reason to suspect problems, by testing the potency of vaccines which have reached immunization delivery points. One of the more important tools for managing the implementation of the project will be the program reviews to be held in each country at least twice during the course of the project. Following a methodology developed by PAHO,a designated group of evaluators, consisting of MOH technical personnel and outside consultants (including personnel from neighboring countries) and representatives of the ICC member agencies will study the program at the national, district, and local levels. The team will examine the successes and problems of the national program, and make recommendations for improvements, including a timetable for implementation.

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The overall implementation of the project in each country may be revised as a result of program reviews. In addition, changes to national annual work plans and PAHO's annual work plans will be made as a result of these reviews.

An international certification commission will review criteria for certification of the eradication of transmission of the wild polio virus in the Americas based on findings of studies conducted and the need to include other criteria to detect the presence of polio virus in the environment. This commission has begun its work under Phase I of this program.

IV. PROJECT DESIGN AND IMPLEMENTATION

A. Design Plans

The baseline data for purpose of measuring the output indicators is discussed in section VII, Project Design Summary. For those countries that do not yet have identified some of the baseline data (e.g. missed opportunities to vaccinations or vaccine coverage by district), this will be established within the first year of the Project, Phase II.

B. Project Implementation

1. Management Structure

The overall Regional implementation, monitoring, and logistical support to the Project will be managed and provided by PAHO/EPI staff, both central level and sub-regional staff. PAHO will also provide increased technical support for developing the regional network of laboratories. PAHO serves as the Secretariat for both the Regional ICC and TAG Committees.

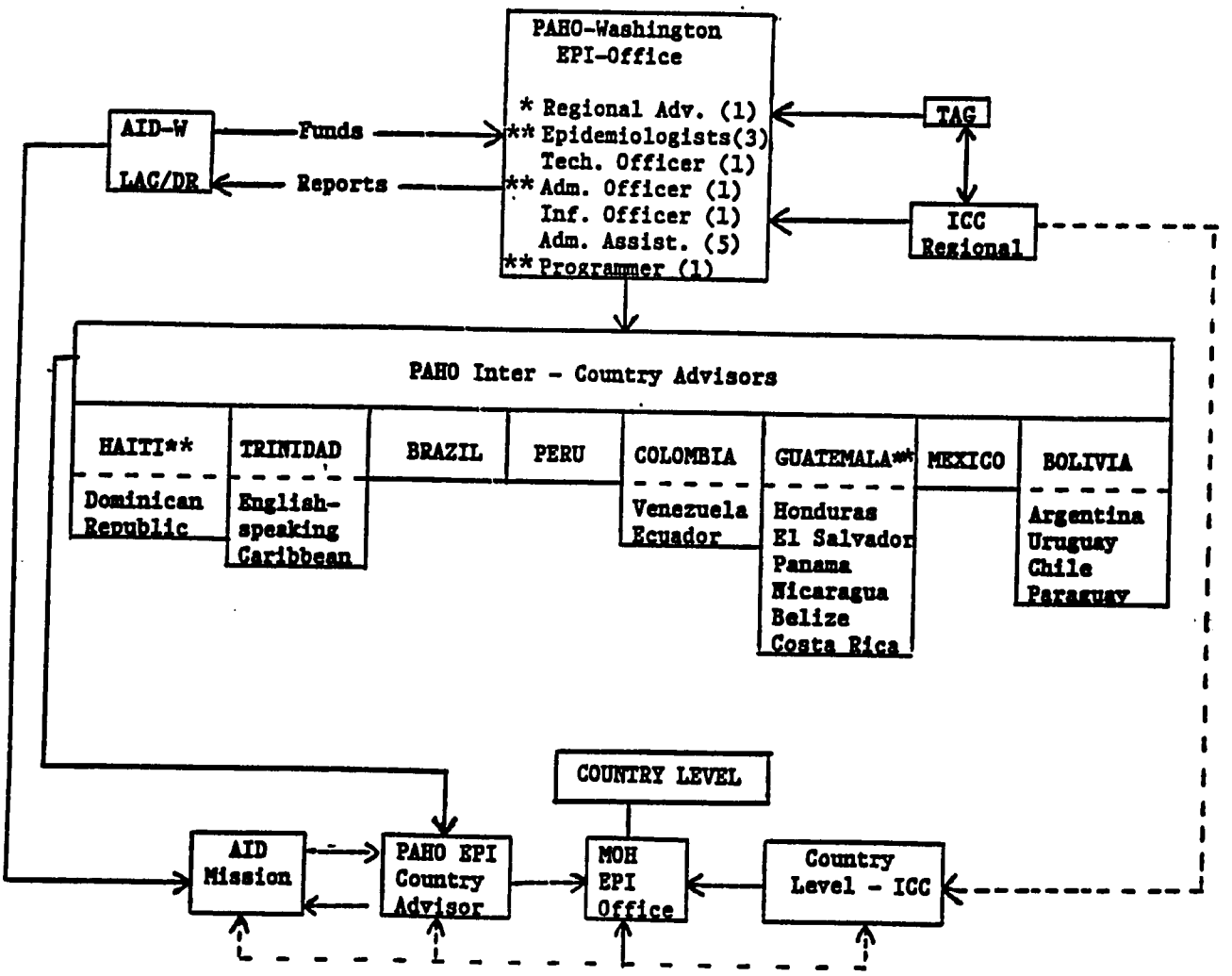
Figure 1 shows the relationships among PAHO, AID, and other organizational units of the Regional Immunization Program to which this Project will contribute.

The units are:

- PAHO's Regional Immunization Office in Washington, D.C.;
- A Technical Advisory Group;
- A Regional Interagency Coordinating Committee, representing donors;
- National Interagency Coordinating Committees
- National EPI offices in the Ministries of Health;
- AID/LAC/DR/HPN
- USAID missions
- PAHO Sub-Regional Advisors
- PAHO Country Advisors

Technical assistance in all areas of immunization program operations will be available through PAHO to its Member Countries. This will include the assistance of additional expert consultants which will include epidemiologists, virologists, laboratory technicians, cold chain specialists, mass media experts in health education, economists, and financial management experts. For this purpose, PAHO has a variety of contracts for hiring additional personnel. PAHO's personnel department will be administratively responsible for managing this, using the PAHO/WHO procedures which are well established. The regional immunization office in Washington will provide the terms of reference for each contract for the provision of technical services, based on requests from the MOHs, discussed and approved by the ICC of the relevant countries.

Figure 1
Organizational Chart
Expanded Program on Immunization



* Project Manager
** AID funded Inter-Country Posts

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2. Planning and Coordination of Project Activities

Success of Project efforts depends upon the participation of every country in the Region and coordination is a key feature of the Project. Coordination at the international, regional, and national levels will be undertaken throughout the life of the Project as described below.

The PAHO regional immunization office will coordinate all activities related to this Project. All reports and requests for Project assistance from the field will go through the PAHO regional immunization office, which will in turn coordinate assistance as needed from other units within PAHO. This is critical to ensure a consistent, coordinated effort in the regional project activities.

a. Regional Interagency Coordinating Committee

Coordination of all international agency inputs will be provided by an Interagency Coordinating Committee with representation from the international agencies contributing to the regional program including PAHO, UNICEF, Rotary, AID, IDB, and the Task Force for Child Survival. The committee assisted in coordination of Phase I and will continue meeting as frequently as necessary (semi-annually or annually) during this Project to review program progress towards coverage targets and the need for additional assistance. This committee has a parallel committee at the country level, to secure interagency participation in individual country plans, and to guarantee the coordination of donor inputs into the countries. The PAHO/EPI program office serves as Secretariat to the Regional Interagency Coordinating Committee. A member of the Technical Advisory Group participates in the ICC meetings in order to advise members on technical recommendations from that group.

b. Technical Advisory Group

To advise PAHO and country programs on the technical components of the program, a Technical Advisory Group (TAG) was formed in Phase I, composed of experts in the field of immunizations. This group will continue its activities in Phase II. The TAG will meet annually with project staff, regional ICC members, and country immunization program managers to review progress and problems encountered. Strategies to achieve required vaccine coverage, recommendations for vaccination schedules, and the choice of vaccines will be reviewed. The TAG will assist in the identification of research needs, review of research project proposals, oversee the progress of the studies under way, and review results. Other technical issues for discussion may be put on the agenda by Project staff or TAG members, sometimes at the suggestion of one or more regional ICC members.

The TAG is composed of a core of six individuals (Membership List is attached as Annex 1.), and will call on additional experts as needed to address special problem areas. Recommendations of the TAG will be published and distributed throughout the Region. The PAHO EPI program office serves as Secretariat to the TAG. Members of the ICC, including AID, are invited to attend TAG meetings (See IV.B.2.b).

c. PAHO Annual Work Plan

The Annual Workplan for the regional immunization program is developed based on the Mid-Term Program for PAHO, approved by the WHO General Assembly, in the context of the biennial budget cycle. The staff of the program, using input from the TAG, country annual plans of action, and issues they consider to be critical, determine the actions to be taken regionally during the year. Around the first week of December, all the PAHO Country Representatives meet in Washington, and the regional staff reconciles their proposals with those representatives. Subsequently, the annual work plan for the regional immunization program, which consolidates national plans and regional activities, is established and published for use as a reference during the year. That plan includes very specific budgeting for the use of regional resources.

d. Sub-Regional Meetings of National Program Managers

For each of PAHO's sub-regions, annual meetings will be convened of the managers of the national immunization programs in the English speaking Caribbean, Central America, the Andean sub-region, and the Southern Cone. These meetings, presided over by a TAG member, are attended by sub-national program managers as well as the national program managers, and donors to the program are invited. These meetings play an important coordinating role, in that they serve to diffuse recommendations from the TAG meetings to the countries, and permit an exchange of information and ideas which help national and sub-national managers to improve their programs by learning from the experience of others.

e. Laboratory Review

During the first year of this follow-on Project, AID-funded PAHO Project staff will undertake a review of laboratories in the region to assess the quality of laboratories and select those that are capable and appropriate to support the immunization programs of the countries of the Region. There are currently nine Regional Reference Laboratories which have been supported by Phase I; addition of new laboratories may be considered with the increased demand on the polio lab network, particularly due to community and environmental sampling, or new demands that may appear as countries increase efforts to further control of measles.

The review will also determine the needs for training and upgrading of lab equipment for laboratories to continue or begin to serve as Regional Reference Laboratories.

f. Sub-Regional and National Coordination

At the sub-regional level (inter-country), the regional program has funded seven epidemiologists (five funded by PAHO, and two funded by AID during Phase I), who serve as technical advisors on an international basis and provide support and supervisory assistance to the country personnel. They assist and cooperate in assessing needs for special intervention in the countries under their jurisdiction; train personnel and trainers at all levels; advise and assist on the procurement of vaccines; design cold chain systems; prepare manuals for improving supervisory and surveillance systems; and provide direct technical assistance to national programs when needed. They also serve as a liaison between the country personnel and the regional office personnel. It is proposed to continue the use of this cadre of personnel during Phase II, although the country coverage assignments have recently been realigned as shown on Figure 1 (See page 27).

Within each country, all activities in the Phase II effort will be under the guidance of the national immunization program office in the MOH, to strengthen coordination of program implementation and to facilitate achievement of national immunization program objectives. This office will oversee the activities at all levels and by all immunization providers within the country, ensure coordination with regional laboratories in case confirmation and program responses to findings, and assure that training needs are identified and that courses addressing these needs are organized and implemented. It will serve as the focal point for identification and coordination of multilateral and bilateral external assistance.

As in Phase I, a major feature of the project will be interagency coordination, with inclusion of non-governmental organizations. A National Interagency Coordinating Committee, led by the National Immunization Program Manager, will meet periodically based on a schedule agreed to in advance, (usually quarterly or monthly) throughout the life of the Project to develop National Plans of Action and Annual Work Plans and to review TAG recommendations, findings of evaluations, program reviews, results of special studies and surveys, and to carry out other monitoring and advisory activities. During this Phase, attention will be increasingly focused on monitoring financing and sustainability of immunization programs. This group will include representatives of donor agencies such as USAID, as well as representatives of key health and non-health implementing agencies in the public and private sectors. Increased participation of organizations in addition to the MOH will be encouraged during this Phase. Written agendas to which all members may contribute will be distributed in advance.

Minutes of each meeting, indicating decisions reached will be prepared and distributed in a timely manner to all members. A copy will be routinely sent to the PAHO regional immunization office, to permit monitoring of how the ICCs are functioning. These procedures will encourage active participation by the various ICC members in program design and management.

An important function of the national ICC is to clarify and coordinate resource inputs such that all necessary actions to maintain and improve vaccine coverage are funded, and that national programs are moving towards increasing levels of local financing. As part of efforts to increase impact with limited resources, all ICC member agencies will be encouraged to discuss their overall support to the national EPI at ICC meetings, and to follow ICC recommendations. Consultants on missions to countries will be encouraged to brief ICC member agencies on their specific terms of reference and their reports will be circulated to MOHs and ICC member agencies.

As part of the work of the country ICCs, donor agency representatives will participate in program reviews, and are expected to be active participants in the development and implementation of program evaluations.

At the national level, it is planned to continue national epidemiologist meetings to discuss potential strategies, and to identify and initiate resolution of local problems. Efforts will also continue in organization of meetings and seminars to involve and motivate private practitioners, universities , non-governmental agencies and other community groups in the program. Widespread dissemination of information regarding the project is also expected to be undertaken by national program staff using local newsletters and distribution of reports of program reviews and surveys to in-country immunization program personnel.

g. National Plans of Action/Country Annual Work Plans

With technical assistance from PAHO, and with the direct involvement of AID missions and other ICC agencies at the country level, detailed National Plans of Action covering the next five years will be prepared by the national immunization program manager with input from other national program counterparts. The national plan within each country will be a blueprint for planners and immunization program managers to follow, and will identify needs for Project inputs.

These Plans will define the nature and magnitude of the problems in each component of the immunization programs and will follow the outline established during Phase I, which forms Annex 2 to this proposal.

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AID Health Officers or their representatives will be invited and actively encouraged to be involved through the Country Interagency Coordination Committee (ICC) in all stages of preparation of National Plans of Action, Country Annual Work Plans, and monitoring and evaluation processes.

During this Phase, country specific field guides or manuals will be developed. These manauals will be used as the basis for formative and in-service training, thereby contributing to the project purpose.

The National Plans of Actions will reinforce coordination with other health programs directed at maternal and child health, such as nutrition, by close coordination and mutual support. This is particularly important in the area of prenatal care and safe delivery, which will impact in the control of neonatal tetanus, as well as in relation to micronutrient distribution such as Vitamin A, which could be delivered through the same logistics and service delivery mechanisms. Of particular importance will be the integration and coordination of the country's immunization information sub-system with the other sub-systems that relate to the maternal and child health services or other primary health care services.

Each country will prepare a financial plan as a part of the Plan of Action. These financial plans will identify capital and recurrent (including manpower) costs associated with the immunization program. Recurrent costs associated with maintenance of the immunization program will be projected beyond 1995 to the year 2000 to assist national institutions to include necessary outlays into their national budgets. To assist the Interagency Coordinating Committees in improving the planning for and mobilization of national resources for the recurrent costs associated with national immunization programs, technical assistance from the Project will assist the country team to refine the definition and identification of recurrent costs for each component. It is expected that each subsequent annual work plan will improve in this respect. Therefore, before the end of the Phase II, each Ministry of Health will know with much more precision the yearly recurrent costs that are required for national immunization programs. Technical cooperation will also be available to assist MOHs or other public sector institutions to prepare budget requests to legislatures to cover such needs. It is expected that, during the course of the Project, increasing proportions of recurrent costs will be assumed by national sources.

These five year National Plans of Action will serve as the framework for the elaboration of Country Annual Work Plans which will detail for each area of action, activities with recurrent and capital costs and funding by national or external source, which can then be monitored by national authorities with participation of donor agencies.

The detailed implementation steps will be specified in the Country Annual Work Plans, with the respective timetable and budgetary and donor resource identification. This timetable constitutes the framework for the management plan to be monitored by the national and donor agencies involved. In some cases and according to the epidemiological situation, countries may choose as targets a different population (under 5's or 3's instead of under 1's, or pregnant women instead of all women of childbearing age, or achievement of OPV-2 coverage by age 1, for example). They will, however, report in such a way that regional statistics can be properly compiled.

Periodic cost-analysis will be performed by national personnel or sub-regional epidemiologists on a country-by-country basis using the WHO-EPI Costing Guidelines (WHO document EPI/GEN/79/5) which outline key concepts in program costing, how costing information may be applied to improve program performance, allocation of resources, and adaptation and selection of more cost-effective strategies.

The National Plans of Action and Country Annual Work Plans will also identify the strategy or combination of strategies to be used for immunization delivery, as described in Section VI.B (Technologies to be used) and outline evaluation activities using a combination of program reviews and other epidemiological and operations research studies as warranted.

Finally, when Country Annual Work Plans are finalized at the national level, a Letter of Agreement should be signed between the Government and donor agencies, specifying all financial and in-kind commitments, external and national.

As mentioned previously, those counties or districts classified at risk for Neonatal Tetanus will receive higher priority in the implementation of the activities listed in their work plans. The high risk areas for neonatal tetanus, which will be the initial target for interventions were identified with the methodology developed by PAHO and now endorsed by WHO (see EPI Newsletter Vol. XII, Number 4, August, 1990). A high risk area is defined as a geographic area of a country which reports a higher morbidity of neonatal tetanus cases than the national average in any of the previous three years. This is measured in total numbers or in rate per 1 000 live births per year. The sources of data are morbidity and mortality, demographic, clinical and epidemiological data available through the health information systems at the national,

regional and local levels. Once these areas are identified they become the initial target of the program efforts and it is critical that simultaneously, the surveillance system is established or improved in order that impact is measured and new areas are identified for new targeting, if warranted.

The areas already identified as at high risk for the initial efforts in the Americas are listed in Annex 4, by country. A detailed listing of all counties or districts, by country, was provided to AID under separate cover.

The following is the present preliminary classification of the countries according to their neonatal tetanus situation:

a. that report systematically: Bolivia, Colombia, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru, Venezuela. Of these, only Guatemala has not started case investigations.

b. that do not report systematically: Argentina, Brazil, Haiti, and Paraguay.

Haiti does not have a tetanus-surveillance system in place. All data were gathered through active hospital search.

C. Measurement and Evaluation of Project Accomplishment

In addition to the program evaluation efforts described in section III. B. 2. i., there will be two evaluations of the Project per se, one in year 3 and one in year 5. If there is a need to evaluate at different times, based on mutual agreement between AID and PAHO, a different schedule may be determined. These evaluations will focus on the measurement and achievement of project outputs and purpose, using indicators as detailed in sections III. A., III. B. 1 and VII. Goal level indicators are monitored by country and regionally by PAHO on a regular basis, as indicated in section VII. The evaluation team will be composed of individuals acceptable to both PAHO and AID, and paid from grant funds.

V. FINANCIAL PLAN

A. Financial Management and Budget

Within PAHO's financial management system, AID Project funds will be maintained as separate extra budgetary allotments, separated by AID funding sources i.e., LAC regional funds (functional accounts) and each mission buy-in, as has been successfully done during Phase I. These allotments will be classified as Regional or Multicountry Projects. It is anticipated that mission buy-ins will total over US$10 million over the life of the project as shown in Table 3.

The management of project funds is contingent upon annual allocations made for each country based on country work plans. It is anticipated project funds will be disbursed as projected in the fiscal calendar shown in Table 4. Funds for each country will be provided through the normal budgetary and accounting procedures

which PAHO has in place for transferring normal program funds. At the country level, all funds will be managed by the PAHO field offices.

PAHO's Financial Management System and EPI Financial Module within the Field Financial Management System (FFMS) which is installed in all countries provides up to date records on a monthly basis regarding the status of disbursements and the implementation of the country work plans. Printouts are available to the ICC and its members including AID missions upon request and will be routinely monitored by the ICC in most countries by the end of this Project. Quarterly financial reports or statements will be prepared by program category as in Phase I. These will be furnished to AID/FM with informational copies to LAC/DR/HPN and missions with buy-ins.

As an International Organization and executing agency for this Project, PAHO's financial records, including documentation to support entries on accounting records and charges within the agreement, will be maintained in accordance with PAHO's standard accounting procedures, which follow generally accepted accounting practices and are consistent with accepted financial rules, regulation and accounting manual procedures. PAHO will maintain all such financial records for at least three years after final disbursement of funds under the agreement.

The financial procedures of PAHO require that funds be obligated prior to incurring any expenditure. In coordination with the Chief, Finance and Accounts, and the PAHO Country Representative, it is the responsibility of the Project Manager to insure that each request for funding under the Plan of Action meets the priorities established under the agreement. Thereafter, each request is reviewed by the Finance Office to insure that it meets all regulations prior to obligation. Funds are then authorized for disbursement at either the Regional or country level.

PAHO will include this program within the scheduled reviews performed by its Internal Audit Department and that the project records and accounts will be subject to audit along with all other financial transactions of the Organization's External Auditors (The Comptroller and Auditor General of the United Kingdom and Northern Ireland). PAHO will furnish copies of all relevant audit reports to AID, along with such other related information as may be requested by AID with respect to questions arising from such audit reports. Special or joint audit reviews on any particular aspect of the program may be carried out by mutual agreement between PAHO and AID.
Funds provided by AID to PAHO shall be disbursed in accordance with the payment provisions established by AID and for financing under a Letter of Credit (LOC or FRLC).

This Project is part of an inter-agency program of collaboration with the countries of Latin America and the Caribbean. As in Phase I, in which the USAID joined with PAHO, UNICEF, IDB, Rotary International and the Canadian Public Health Association (CPHA), it is expected that many of these agencies will continue to collaborate, through the ICC mechanism, and with the countries to sustain these efforts in a Phase II program.

These intentions have been voiced in the last regional ICC Meting held in Washington, D.C. in December, 1989 and PAHO is already in negotiations with the IDB and Rotary for its participation in this Phase II program. The tentative Budget shown in Table 5 illustrates what is expected from USAID, IDB and PAHO. It is estimated that additional bilateral contributions from UNICEF and Rotary International at country level may be in the order of US $10 million each over the five year period 1991-1995.

Table 3.
Summary of Proposed AID Project Budget
By Funding Source and Category
1991 - 1995
(US$1000)

Category	PAHO Total	USAID Total	USAID Regional	USAID Buy-In	PROJECT TOTAL
Personnel	5,970	3,124	3,124	-	9,094
Surveillance/Info	250	1,300	800	500	1,550
Meetings	250	1,200	900	300	1,450
Laboratories	200	1,200	700	500	1,400
Training	300	1,800	700	1,100	2,100
Mobilization	0	3,350	350	3,000	3,350
Cold Chain	300	1,826	226	1,600	2,126
Research	250	1,500	500	1,000	1,750
Evaluation	400	1,200	500	700	1,600
Contingency	0	1,199	750	449	1,199
Subtotal	7,920	17,699	8,550	9,149	25,619
Overhead	0	2,301	1,112	1,189	2,301
Grand Total	7,920	20,000	9,662	10,338	27,920

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Table 4.
Proposed A.I.D. Budget Phase II - 1991-1995
By Category
(U.S. $1,000)

	1991	1992	1993	1994	1995	TOTAL
A. PERSONNEL*						
3 Epidemiologists(Washington)	255	262	284	303	318	1,422
Epidemiologist(Guat)	92	103	101	109	108	513
Epidemiologist(Haiti)	103	107	116	122	129	577
Project Adm. Officer(Wash)	65	69	74	79	83	370
Computer Programmer(Wash)	42	45	48	52	55	242
SUBTOTAL	557	586	623	665	693	3,124
B. SURVEILLANCE/INFORMATION						
Computer Services (hardware and software for 20 countries including further development of information systems and installation in the countries)	260	260	260	260	260	1,300
SUBTOTAL	260	260	260	260	260	1,300
C. MEETINGS						
1 TAG Meetings per year	140	140	140	140	140	700
4 Subregional Mtgs.annually	100	100	100	100	100	500
SUBTOTAL	240	240	240	240	240	1,200
D. LABORATORIES						
Equipment, supplies, and grants	240	240	240	240	240	1,200
SUBTOTAL	240	240	240	240	240	1,200
E. TRAINING (surveillance, cold chain, laboratory, management and logistics; 10 courses/yr)	360	360	360	360	360	1,800
SUBTOTAL	360	360	360	360	360	1,800

* Cost of each post includes: Salary, Post adjustment,Dependent allowances, Pension Fund, Insurances, Terminal payments, Recruitment and installation allowances, Education grant

F. MOBILIZATION (Supervision, surveillance, outbreak control)						
Inter-country personnel						
- 5 Wash. staff (travel)	70	70	70	70	70	350
- 2 Sub-reg staff (travel)	40	40	40	40	40	200
Fuel and maintenance	360	360	360	360	360	1,800
Perdiem	200	200	200	200	200	1,000
SUBTOTAL	670	670	670	670	670	3,350
G. COLD CHAIN (Refrigerators, cold rooms, spare parts, tool kits, grant to testing center)	416	461	357	343	249	1,826
SUBTOTAL	416	461	357	343	249	1,826
H. RESEARCH						
6 projects/year	300	300	300	300	300	1,500
SUBTOTAL	300	300	300	300	300	1,500
I. EVALUATION						
Laboratory/Cold chain eval	60	60	60	30	20	230
Program Reviews (3 countries/year)	140	140	140	140	100	660
Polio Cert Comm	80	80	-	-	-	160
AID Project Eval	-	-	75	-	75	150
SUBTOTAL	280	280	275	170	195	1,200
J. CONTINGENCY	220	220	220	220	319	1,199
SUBTOTAL	220	220	220	220	319	1,199
TOTAL	3,543	3,617	3,545	3,468	3,526	17,699
OVERHEAD (13%)	474	470	461	451	445	2,301
GRAND TOTAL	4,117	4,087	4,006	3,919	3,871	20,000

Table 5
Illustrative Program Budget by Donor and Program Category
Regional Immunization Program
(U.S. $1000)

Category	USAID	PAHO/ WHO	IDB	UNICEF	ROTARY	TOTAL
PERSONNEL						
Inter-Country	$ 3,124	$3,745				$ 6,869
In-Country	2,225	$1,000				3,225
SURVEILLANCE/INFO	1,300	250	$2,800		$ 1,500	5,850
MEETINGS	1,200	250				1,450
LABORATORIES	1,200	200				1,400
TRAINING	1,800	300	2,000			4,100
MOBILIZATION	3,350			$ 2,000		5,350
PROMOTION				2,000	700	2,700
COLD CHAIN	1,826	300		2,000		4,126
EVALUATION	1,200	400				1,600
RESEARCH	1,500	250				1,750
VACCINE/SYRINGES			3,000	4,000	7,800	14,800
CONTINGENCY	1,199					1,199
OVERHEAD	2,301		1,114			3,415
TOTAL	$20,000	$7,920	$9,914	$10,000	$10,000	$57,834

NOTE: USAID funds would be managed by PAHO under the Phase II Project. In addition, it is anticipated that USAID missions would continue support country programs through bilateral funding, which could be identified during the organization of the national plans of action. During Phase I these bilateral USAID funds were on the order of US$20 million. A similar level of bilateral funding in Phase II would bring the total external support up to US $77 million.

It is expected that IDB funds would be granted to PAHO as well. Funds from UNICEF and ROTARY would be channelled bilateraly with exception of US$1.5 million from ROTARY in the line item of Surveillance which would be managed by PAHO.

B. Procurement

All procurement by PAHO of supplies and equipment with funds provided under this Project shall be carried out in accordance with PAHO's established purchasing procedures and will be consistent with generally accepted business practices. PAHO's purchasing procedures stipulate that equipment and supplies which cannot be obtained locally by the Country Representative under delegated local purchase authority or which are more advantageous to purchase centrally are procured by the PAHO Procurement Office.

PAHO Country Representatives are authorized to make purchases and enter into contract for the types of procurement, within the dollar limits set forth in their individual delegations of authority following the obligation of Project funds. Local purchase refers to a purchase within the country. It implies that the goods are locally manufactured, or if imported that they can be delivered promptly from stock. When a purchase is likely to exceed $2,500, the Country Representative should obtain quotations from three suppliers, unless there is only one source of supply.

PAHO will prepare and submit to AID all procurement reports or statements, as may be required, on a periodic basis.

All countries should ensure that the vaccines used in the program meet WHO requirements. This will be accomplished by use of PAHO's Revolving Fund to facilitate the procurement of vaccine at affordable prices for member countries. This mechanism may help obtain a further decrease in price of the Hepatitis B vaccine, for example. During the course of Accelerated Immunization Phase II project, the ICCs will emphasize that host countries assume responsibility for purchase of needed vaccines; it is expected that Rotary International support will be phased down gradually in a country by country basis, between 1991 and 1995.

Vaccine distribution will be a key component of immunization activities. Efficient distribution systems will be essential to ensure that viable vaccines are available at the delivery points. This Project will provide technical cooperation to the MOHs on planning of adequate logistics and funds for refrigerators, cold rooms (for central storage of vaccine), spare parts for cold chain equipment, and tool kits for maintenance. Whenever possible and when the capitalization of the EPI Revolving Fund for the Purchase of Vaccines permits, cold chain equipment as well as syringes and needles may be purchased though this mechanism.

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The PAHO Revolving Fund for the procurement of vaccines and syringes, coordinated by the Project Manager, the Procurement and Finance Offices of PAHO was first capitalized in 1978. For more than twelve years countries participating in the fund have been submitting annual and quarterly requirements for BCG, DPT, DT, Measles, Polio and TT vaccines. Bids are solicited by the Procurement Office for annual requirements and deliveries are programmed on the basis of quarterly requests, from the respective countries.

Vaccine laboratories are approved as sources of supply by the PAHO Regional Advisor in Biologics who ascertains that the laboratories have the production and quality assurance capability to meet WHO specifications. Allocation of laboratories as sources of supply is made in consultation with the Project Manager taking into account special conditions which may apply in individual countries.

The intent of this Project is not to purchase vaccine or syringes. However, as in Phase I, the missions may avail themselves of the EPI Revolving Fund by financing the purchase of a given order either through the buy-in mechanism or a PIO/C provided the applicable waivers have been obtained to facilitate the operation of the Fund.

VI. PROJECT ANALYSIS

A. Economic Effects

The primary beneficiaries of the regional immunization program to which this project will contribute are the children under five years of age and women of child bearing age in Latin America and Caribbean, who are susceptible to the diseases preventable by immunizations and resulting death. They will benefit from immunization of children under one and women in fertile ages (especially in areas where neonatal tetanus is endemic). Since children under five rarely are economically active, there is no direct economic benefit to them, but their families, as well as their nations, benefit from: the reduction in costs for treatment of diseases, increased lifelong productivity due to fewer preventable handicaps, and reductions in the ultimate cost to society when it looses a child to a preventable death. The prevention of deaths from tetanus resulting from self-induced abortions or infection during delivery, can substantially reduce maternal mortality overall.

The complications arising from measles, such as blindness and brain damage due to measles encephalitis, are forms of handicap that will affect the child's activity throughout his/her life. The various handicaps, especially blindness due to measles, result in reduced productivity in any country.

Morbidity creates a demand on the health system, and one cannot dismiss this cost factor by pointing out that not all children seek treatment from health services. While cost data for treatment of vaccine-preventable diseases is not readily available for LAC countries, the cost savings to be realized from reduced treatment of measles cases has a cost benefit ratio of 11.9:1 for the U.S. [1] In Haiti, it was estimated that the cost-benefit ratio for tetanus immunization was around 9:1. [2] Using these data it may rationally be assumed that the cost savings to be realized from those immunizations, which will be the focus of Phase II of this project, are significantly positive in any setting.

The reduction of disease risk due to increased immunization coverage and improved disease control programs in LAC will also result in reduction in the risk of infection of the U.S. population, by reducing the number of imported cases of measles and poliomyelitis, for example.

With the expected increased vaccination coverage and consequent reduction of EPI diseases among the population, the health services should realize a net savings from not treating children suffering from the EPI diseases. These cost savings as a result of reduced disease burden can be used to support recurrent costs of EPI activities and child survival interventions.

The efforts directed at eradication of the transmission of wild polio virus between 1985-1990 in the Americas are estimated to have cost $120 million. The savings in medical costs alone over this five-year period, using an average cost per patient for a hospitalized case of polio, was estimated during development of the Accelerated Immunization I project to be around $200 million. These savings will continue year after year, if protection against imported cases can be maintained. Those recurrent costs, estimated to be around $10 million per year, imply a net savings to be gained of about $30 million per year. This calculation does not take into account loss of income due to paralysis nor loss of life.

1.Bart, K.J., Orenstein, W.A and Hinman, A.R. The virtual elimination of Rubella and Mumps from the United States and the use of combined measles, mumps and rubella vaccines (MMR) to eliminate measles. Develop. biol. Standar., Vol 65, pp 45-52 (S. Karger, Basel, 1986)

2.Haaga, J. Cost Effectiveness and cost-benefit analyses of immunization programmes in developing countries. D. Jellife and E.F.P. Jellife, eds. Advances in International Maternal and Child Health, vol.6, 1986. New York: Oxford university Press.

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Because the process of assigning value to human life is both unpleasant and unfamiliar, economists have a difficult time providing decision-makers with clear cut guidelines. Nevertheless, the argument can be made that to omit the benefits in terms of lives saved or prolonged is to neglect a primary contribution of the program.

In addition to the economic benefits to families and societies, there are social and health benefits which are almost impossible to quantify. For example, the avoidance of suffering of children and their families and increased prenatal care for expectant mothers which will likely result from offering improved services which include tetanus toxoid vaccine.

B. Technologies to be Used

The current level of coverage with all EPI antigens is estimated to be at 75% for children under 1 year of age. The coverage levels vary from country to country, as displayed above in Table 2. To maintain and increase these coverage to 90% of all children under 1 year of age, the regional immunization program will use a variety of tactics.

The main strategy recommended by PAHO for the delivery of immunization services is through the existing health infrastructure, in conjunction with other maternal and child health services, with emphasis on the elimination of missed opportunities to vaccinate and reduced drop-outs during the vaccination sequence. This strategy is endorsed by its Directing Council and the ICC member agencies. This main strategy conforms with the overall strategic approaches of PAHO's technical cooperation, which aims at developing the countries self-sufficiency in the delivery of health services (including immunization) through a strengthened health infrastructure and basic health services. Depending on the stage of development of the health infra-structure or epidemiological circumstances other complementary strategies can be useful in increasing coverage, effectiveness and impact in disease reduction or even interruption of transmission. Some of the variables that should be considered in assessing the capacity of the health infrastructure relate to the access (particularly geographic) of the population to basic health services, logistical issues and extension of the cold chain, for example. Among the epidemiological variables to be considered, the extent of transmission of the disease or if it is an endemic or epidemic situation will be critical to be considered. For example, if the infrastructure of a given country is not sufficiently developed to reach the majority of the target population, such complementary tactics may be considered. They may be also needed to stop nationwide, regional or global transmission of a given disease, such as poliomyelitis or measles, or in presence of outbreaks.

Such complementary approaches include mobile teams, national or sub-national vaccination campaigns, house-to house vaccination, concentration of large numbers of children and special "mop-up" operations in areas with high risk for the diseases included in the program. The selection of the complementary immunization delivery strategies by the Ministry of Health of a particular country, to be used at the national or sub-national level, should take into consideration the local epidemiological conditions and the infrastructure capability as stated above, and need not conform to a pre-established pattern @. For example, those countries in which transmission of wild poliovirus still persist may have to continue with national vaccination days until transmission is finally interrupted; if a country or countries decide to interrupt measles transmission (e.g. English-speaking Caribbean), campaigns of short duration may be warranted; or if high risk areas to neonatal tetanus are identified in remote regions of a country, periodic mobile teams may be appropriate. Finally, the utilization of complementary tactics should not be a replacement to the routine vaccination activities. Continuous program evaluation on service delivery and operations research will guide the decision making process on the adjustment of the combination of strategies to be applied as the program evolves.

Improved cost effectiveness of delivery strategies will enable national immunization programs to maximize the services delivered with available resources. This will require careful record-keeping, both of services delivered and resources used, and courage on the part of program managers to make the hard choices to choose the best delivery strategy for each situation. Improving cost effectiveness will also be facilitated by the trend toward decentralization, which will put decisions in the hands of managers closer to actual service delivery.

In all countries, vaccination schedules recommended by PAHO, including the simultaneous administration of all vaccines (which met WHO/PAHO requirements) are used, thereby improving cost-efficiency as each child can receive at least four vaccines (DPT, BCG, OPV and Measles vaccines) containing six antigens, at each contact with the health system. Because of the various delivery strategies that can be used to vaccinate children, provision of immunization services can be very efficient in achieving low cost per vaccine dose delivered. Cost-effectiveness will increasingly be the guiding principle in selecting what delivery strategies to select in a specific situation.

@ See PAHO Position Paper on Immunization Delivery in the Americas, Washington, D.C., September, 1983; EPI Policy and Strategic Approaches in the Americas: A Joint Statement by ICC Member Agencies, Washington, D.C., 1987; and Planning Principles for Accelerated Immunization Activities: A Joint WHO/UNICEF Statement, Geneva, 1985.

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Another technology used will be to analyze policies to advise local immunization authorities regarding desirable changes in laws or regulations. These might include such things as legislation reinforcing vaccination and obligatory vaccination of newborns with BCG and polio vaccine.

Regarding the technical elements which go into the immunization program, Phase II will continue to transfer commodities and technical knowledge, as in Phase I. When new vaccines are available, such as the high titre EZ vaccine, which will represent a major breakthrough in preventing measles cases and deaths in children less than one year of age, they will be tested programmatically in pilot areas, to learn how best to administer them in the regional program. Another example might be the use of the measles, mumps, and rubella (MMR) vaccine in the Caribbean as part of the measles eradication effort there. Consideration will also be given to using the new Hepatitis B vaccine as a pilot effort in some programs. Similarly, some of the new self-destructing syringes, which cannot be reused, may be tried on a trial basis. This would avoid both the problems of sterilization of re-usable needles and syringes, and the much more serious problems of re-use of disposable syringes, which sometimes occurs in an atmosphere of resource scarcity. The criteria for the selection of syringes is related to several factors such as: cost, capability of supervision of field utilization, destruction of reusable ones as well as facilities for sterilization. PAHO will continue to introduce new technologies in cold chain equipment and temperature monitoring that becomes available, including wider application of solar technologies.

C. Socio-cultural Factors

While there is occasional local resistance to immunization programs, there are not major, region-wide socio-cultural factors which impede the delivery of or acceptability of such services. This is demonstrated by the increases in coverage in recent years, shown in Table 2. At the same time, country Interagency Coordinating Committees will need to be alert to possible socio-cultural factors impeding progress in immunization coverage in specific areas. If problems arise, operations research funded by the proposed A.I.D. grant to PAHO could be used to identify and test alternate delivery of vaccinations.

Interests which might conceivably be harmed by this Project would be those merchants who provide goods and services connected with children's deaths, such as coffins and burial clothes, and physicians who will not receive fees for treating measles, for example.

In an interesting "flip side" to the reduction in missed opportunities to vaccinate, it is probable that other child survival services can be provided to more children because once the parents have understood and accepted the need to immunize their children according to national immunization schedules, the health system can take advantage of the contact to encourage utilization of other child survival services, such as education regarding diarrheal disease or avoidance of high risk births.

D. Sustainability Contributions of Project Activities

With the support to better planning and management of resources and to the infrastructure needed for immunization programs provided by this project, and the cost savings resulting from reduced disease burdens, Phase II will contribute to the efforts of all governments in sustaining their immunization programs beyond the duration of the project.

The reorganization of the health sector, with emphasis on financing, decentralization, and the full utilization of the social security systems and the private sector, will be an important element reinforcing the sustainability of immunization programs. This strategic orientation was approved by the Pan American Sanitary Conference, held in Washington, D.C. in September, 1990.

In order to ensure that national immunization programs increase their sustainability, Phase II components will contribute as described below.

1. Personnel for Technical Assistance and Coordination

As part of the work performed and the advice given to national ICCs and immunization service providers, project personnel will give strong attention to the issue of sustainability of immunization services. This will be accomplished by focussing on effectiveness and efficiency in support services. One excellent example is the budget planning inherent in the National Plans of Action and the Country Annual Work Plans. In addition, project personnel and consultants will assist host country immunization program managers to conduct analysis of costs to reach and sustain 90% coverage in the nine AID priority countries.

2. Epidemiologic Surveillance and Management Information Systems

This Project will enhance surveillance activities for prompt detection of all suspected cases of poliomyelitis (acute flaccid paralysis), measles and tetanus as well as the other EPI diseases, in order that immediate control measures be implemented and that routine surveillance information is used to improve program decision-making. The provision of computers and software to record

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and analyze epidemiologic, service delivery, and financial information, the training of personnel to collect and analyze such data, and the experience gained in implementing control measures in response to suspected cases will be permanent improvements in the capability of host country health institutions, public and private, to respond to vaccine-preventable diseases and better manage their programs.

3. Meetings

The annual meetings of national immunization program managers will not continue after this Project is over, without additional donor support. However, the knowledge gained by the sharing of problems and solutions among the national managers is likely to increase their problem-solving skills, their repertoire of responses, and the network which they can contact for assistance to improve their programs. In many cases, the learning acquired by senior managers that attend these meetings with the national EPI managers will contribute to program sustainability.

The Technical Advisory Group meetings to be supported by this Project will enhance long-term program sustainability in at least two ways: first, by encouraging adoption of technologies and program strategies which will contribute to sustainability, and second, by selecting research topics which will enable managers to identify, test, and measure results of management changes which can improve sustainability in specific, region-wide contexts.

4. Laboratories

The sustainability of immunization services will be increased by this Project's support for improving the capability of national laboratories to provide reliable diagnostic services through the provision of new equipment, and newer methods for isolation and characterization of viruses and bacteria, and training for laboratory staff. This is because without reliable laboratory backup, program managers cannot respond as well to disease outbreaks, and would therefore be less able to make appropriate decisions regarding deployment of their resources, now and in the future. In addition, the support to the Regional Reference Laboratories, especially during the intensive eradication phases of the regional program, will enhance long-term sustainability by changing the task of national immunization programs from elimination of disease to maintenance of that state, which is substantially easier.

5. Training

Training of health workers at the various levels of the health system on planning, management, implementation and evaluation of immunization programs as well as in epidemiologic surveillance, information management, cold chain and logistics, and operations research, will all contribute to the quality of the personnel pool from which national immunization programs draw.

The greater the competence of the available national staff, the more sustainable national immunization programs will become.

6. Mobilization for Supervision, Surveillance, and Outbreak Control

AID's contribution to this Project will cover the costs of inter-country personnel visits to national programs, and mobility for in-country personnel. During their visits to national programs, inter-country advisors will assist in the development and implementation of routine supervisory systems from the central to the district levels to assure that immunization services are being rendered in effective, efficient, and technically appropriate ways. In addition, program managers will be better able to adjust annual plans to include new approaches and corrections which result from supervisory visits. During the course of this Project, it is expected that the increased share of recurrent costs of service delivery absorbed by national budgets will include these supervisory expenses.

7. Cold Chain and Logistics

The provision of cold chain equipment (refrigerators and cold rooms), as well as spare parts and tool kits, will assure that national cold chains are improved and/or extended to those areas currently deficient or lacking appropriate equipment, to permit immunization services to be available routinely.

8. Research

Operations research will be an important part of AID's contribution to this Project, and will enable managers to increase program performance by identifying solutions to operational problems and measuring their impact, so that immunization programs meet their targets and sustain their operational capacity into the future, at the lowest possible recurrent cost. In order to assure that research results are used, advisors will take care to develop operations research studies responding to problems as the program managers and implementers see them.

9. Evaluation and Certification Commission

By performing a mid-term evaluation of this Project, it will be possible to identify problems, solutions and changes in Project activities which will result in the Project reaching as close as possible to its purpose, and contributing the most to the sub-goal of 90% coverage by the end of the Project and the disease reduction targets.

The work of the Certification Commission will largely benefit the regional effort, by the revision of the technologies and methodologies that eventually will lead to the certification that transmission of wild poliovirus has been interrupted in the Americas. These technologies include strengthened surveillance, contributing to the local capabilities to reduce disease incidence and immunization delivery. The molecular biology laboratory techniques that need to be developed will be useful for the diagnosis of other communicable diseases in the future.

10. Promotion

PAHO will work together with MOHs and other ICC member agencies or other agencies involved with communications programs, to attempt to target these programs to the real needs of each program as identified by program evaluations. Of particular importance will be the decentralization of communications and promotion programs, to adjust their contents to local conditions.

VII. PROJECT DESIGN SUMMARY

Life of Project:
From FY 91 to 95
Total U.S. Funding $20,000,000
Date Prepared: 4/24/91

Project Title : Accelerated Immunization Project, Phase II

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS			MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Program or Sector Goal: The Broader objective to which this project contributes	Measures of Goal Achievement:				Assumptions for achieving goal targets:
To reduce morbidity and mortality among children and women of childbearing ages from immunopreventable diseases.	Mortality Reduction	1990	1995	Country MOH reports to PAHO	1. There are an estimated 20,000 deaths due to Measles, 10,000 due to Pertussis and 8,000 due to Neonatal Tetanus per year in Latin America.
	Measles	4.4	1.0		
	Neonatal tetanus	0.6	0		
	Pertussis	2.2	1.0		
	Polio	0	0	Report of Certification Commission	2. CFR for Measles 4% and Pertussis 3%.
	Morbidity Reduction			Country MOH reports to PAHO	
	Measles	110.0	60.0		3. There are an estimated 500,000 cases of Measles, 300,000 cases of Pertussis 10,000 cases of Neonatal Tetanus occurring every year in Latin America.
	Neonatal tetanus	1.0	0		
	Pertussis	66.6	33.0		
	Polio	0	0	Report of Certification Commission	

Note: Mortality:
Measles, Pertussis and Polio: Deaths per 100,000 population
Neonatal Tetanus: Deaths per 1,000 live births
Morbidity
Measles, Pertussis and Polio: Cases per 100,000 population
Neonatal Tetanus: Cases per 1,000 live births.
No measles cases in the English-speaking Caribbean by 1995.

Best Available Copy

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NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Program or Sector Goal: The Broader objective to which this project contributes	Measures of Goal Achievement:		Assumptions for achieving goal targets:
Sub-Goal			
To increase coverage with all EPI antigens.	Coverage of each EPI antigens (DPT, Polio, Measles, BCG) increases from 75% in 1990 to 90% in 1995, among children under one year of age in all LAC countries.	Country MOH reports to PAHO Coverage surveys (if undertaken)	
	Women in childbearing years in high risk areas with 2 dose of TT increases from 30% in 1990 to 80% in 1995.	ditto	

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Date Prepared: 4/24/91

Project Title: Accelerated Immunization Project, Phase II

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Project Purpose:	Conditions that will indicate purpose has been achieved: End-of-Project status.		Assumptions for achieving purpose:
To increase the efficiency and effectiveness of immunization service delivery by:			1. Vaccinations will be reported by dose and district in children under one year of age and women of childbearing age.
- reducing missed opportunities to vaccinate and	Missed opportunities reduced by 50% between 1990 and 1995 in all 9 priority countries and others which have identified such levels.	Missed Opportunities studies. Coverage surveys, where performed.	
- improving geographic access to immunization services	In 75% or more "municipios" DPT1 or OPV1 will increase to 95% by 1995.	Country MOH reports to PAHO Coverage surveys where conducted	

NOTE: The following is the level of missed opportunities for those countries that have conducted studies: Bolivia 32%, Colombia 73%, Ecuador 34%, El Salvador 45%, Guatemala 51%, Honduras 45%, Mexico 40%, Nicaragua 66%, Peru 48%, Paraguay 67% and Venezuela 52%.

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Date Prepared: 4/24/91

Project Title: Accelerated Immunization Project, Phase II

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Project Outputs:	Magnitud of Outputs:		Assumptions for achieving outputs:
Improved norms, training, and supervision of measles and neonatal tetanus immunizations, and for avoiding missed opportunities.	All countries have new field guides or manuals with improved norms on measles and neonatal tetanus immunization and for avoiding missed opportunities.	New field guides or manuals developed.	ICC will meet regularly and monitor country work plans.
	All annual country plans show use of new manuals for training and supervision.	Country Annual Work Plans.	
	All ICCs monitor implementation of training and supervision with new manuals as planned.	ICC minutes.	

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Date Prepared: 4/24/91

Project Title: Accelerated Immunization Project, Phase II

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Project Outputs:	Magnitud of Outputs:		Assumptions for achieving outputs:
Improved targetting of immunization program resources.	All country Annual Work Plans show that districts which have lower than average coverages or higher disease incidence will receive a proper and fair share of the resources, not necessarily proportional to the size of their population but proportional to the size of the problem.	Country Annual Work Plans and ICC monitoring of expenditures.	1. Countries will report vaccinations by age group, dose and district. 2. Surveillance will be descentralized to district level.
Immunization Program sustainability is improved	National funds cover an increased proportion of recurrent costs of immunization programs in all countries in 1995 compared to 1990.	Country Annual work Plans and ICC monitoring of expenditures	3. MOHs and ICC members will release periodic reports on disbursements.
	The number and variety of national organizations participating in ICCs meetings increases.	ICC minutes	
	The number of ICCs adopting and maintaining financial monitoring of Annual Plans increases.	ICC minutes	
	The number of ICCs increases with: - published schedules - open agendas - consultation on new actions - minutes published	ICC records	

ANNEX 1
TAG MEMBERSHIP AND ATTENDANCE LIST AT THE NINTH MEETING

Guatemala, Guatemala
12 to 15 March, 1991

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Leroy Benons, Epidemiologist, Trinidad
Airton Fischman, Epidemiologist, Venezuela
Milford Hatch, Virologist, CDC, USA
Craig Shapiro, Virologist, CDC, USA
Marc Strassburg, Epidemiologist, USA

EPI INTER-COUNTRY CONSULTANTS
Mauricio Landaverde, Epidemiologist, Bolivia
Bernardus Ganter, Epidemiologist, Brazil
Cristina da Cunha, Epidemiologist, Guatemala
Salvador Garcia, Epidemiologist, Haiti
Armin Fidler, Epidemiologist, Mexico
Rosa Cardoso, Epidemiologist, Peru
Henry Smith, Technical Officer, Trinidad

EPI, WASHINGTON, D.C.
Jon Andrus, Epidemiologist
Jeannette Bolaños, Office Assistant
Peter Carrasco, Technical Officer
Roxane Eikhof, Technical Officer
John Fitzsimmons, Technical Officer
Jean-Marc Olivé, Epidemiologist
Claudio Silveira, Epidemiologist
Fernando Vargas, Programmer

HPT, WASHINGTON, D.C.
Francisco Pinheiro, Medical Officer, Communicable Diseases

DRC, WASHINGTON, D.C.
Akira Homma, Medical Officer, Biologicals

HPD, WASHINGTON, D.C.
Francisco Lopez Antuñano, Area Director
Health Programs Development

TABLE 1 EXPANDED PROGRAM ON IMMUNIZATION
PLAN OF ACTION YEAR XXXX – SUMMARY
COUNTRY XXXXXX
(COST IN THOUSAND OF US$)

AREA OF ACTION	TYPE OF COST	EXTERNAL SOURCES										NATIONAL SOURCE		GRAND TOTAL
		P A H O				BILATERAL				TOTAL EXTERNAL	%			
		REG.	AID	BID	TOTAL	UNICEF	AID	ROTARY	CPHA			TOTAL	%	
1. BIOLOGICALS LOGISTICS	CAPITAL													
	RECURENT													
	TOTAL													
2. COLD CHAIN	CAPITAL													
	RECURENT													
	TOTAL													
3. TRAINING	CAPITAL													
	RECURENT													
	TOTAL													
4. SOCIAL COMMUNICATION	CAPITAL													
	RECURENT													
	TOTAL													
5. OPERATIONAL COSTS	CAPITAL													
	RECURENT													
	TOTAL													
6. SUPERVISION	CAPITAL													
	RECURENT													
	TOTAL													
7. EPIDEMIOLOGICAL SURVEILLANCE	CAPITAL													
	RECURENT													
	TOTAL													
8. RESEARCH	CAPITAL													
	RECURENT													
	TOTAL													
9. EVALUATION	CAPITAL													
	RECURENT													
	TOTAL													
TOTAL	CAPITAL													
	RECURENT													
	TOTAL													

TABLE 2 EXPANDED PROGRAM ON IMMUNIZATION

PLAN OF ACTION, ANNUAL FINANCING BY AREA OF ACTION AND SOURCE, YEAR XXXX

COUNTRY: XXXXXX

(COST IN THOUSAND OF US$)

AREA OF ACTION: 1. BIOLOGICALS AND LOGISTICS

ACTIVITIES	EXPECTED OUTPUT	QUARTER				RESPONSIBLE UNIT	TYPE OF COST	EXTERNAL SOURCES										NATIONAL SOURCE		GRAND TOTAL
								P.	A	H	O	BILATERAL				TOTAL				
		1	2	3	4			REG.	AID	BID	TOTAL	UNICEF	AID	ROTARY	CPHA	EXTERNAL	%	TOTAL	%	
1.							CAPITAL													
							RECURENT													
							TOTAL													
2.							CAPITAL													
							RECURENT													
							TOTAL													
3.							CAPITAL													
							RECURENT													
							TOTAL													
4.							CAPITAL													
							RECURENT													
							TOTAL													
5.							CAPITAL													
							RECURENT													
							TOTAL													
6.							CAPITAL													
							RECURENT													
							TOTAL													
7.							CAPITAL													
							RECURENT													
							TOTAL													
8.							CAPITAL													
							RECURENT													
							TOTAL													

TABLE 3 EXPANDED PROGRAM ON IMMUNIZATION

EXECUTIVE SUMMARY, 1991 - 1995

COUNTRY XXXXXX

(COST IN THOUSAND OF US$)

SOURCE	TYPE OF COST	1991	1992	1993	1994	1995		TOTAL
PAHO REGULAR BUDJET	CAPITAL							
	RECURENT							
	TOTAL							
PAHO-AID GRANT	CAPITAL							
	RECURENT							
	TOTAL							
PAHO-IDB GRANT	CAPITAL							
	RECURENT							
	TOTAL							
PAHO-TOTAL	CAPITAL							
	RECURENT							
	TOTAL							
UNICEF	CAPITAL							
	RECURENT							
	TOTAL							
AID-BILATERAL	CAPITAL							
	RECURENT							
	TOTAL							
ROTARY	CAPITAL							
	RECURENT							
	TOTAL							
CPHA	CAPITAL							
	RECURENT							
	TOTAL							
TOTAL	CAPITAL							
	RECURENT							
	TOTAL							

PAN AMERICAN SANITARY CONFERENCE
PAN AMERICAN HEALTH ORGANIZATION
REGIONAL COMMITTEE MEETING
WORLD HEALTH ORGANIZATION

RESOLUTION

ANNEX 3

X

PLAN OF ACTION FOR THE ERADICATION OF INDIGENOUS TRANSMISSION OF WILD POLIOVIRUS FROM THE AMERICAS

THE XXIII PAN AMERICAN SANITARY CONFERENCE,

Having reviewed the progress report presented by the Director on the implementation of the Expanded Program on Immunization (EPI) and the Plan of Action for the Eradication of the Indigenous Transmission of Wild Poliovirus from the Americas by 1990 (Document CSP23/19 and ADD. I);

Noting with satisfaction that immunization coverage levels continued the increased trend observed in previous years, reaching again a historical high in 1989;

Taking note of the continued declining trend of the diseases included in this program;

Observing from the data presented that indigenous transmission of wild poliovirus may be on the verge of being interrupted in the Western Hemisphere and that an International Commission has been established to start procedures for the certification that transmission has been interrupted;

Cognizant that both the increase in immunization coverage level and the effort to eradicate polio have been major factors in the strengthening of the health infrastructure in general and of epidemiological surveillance in particular; and

Fully aware that what remains to be done to further increase immunization coverage and achieve the final interruption of transmission will require extraordinary measures by Member Governments,

RESOLVES:

1. To recognize and express deep appreciation for the critical role that USAID, the Inter-American Development Bank, UNICEF, CIDA/CPHA and Rotary International have played in the last five years, particularly after the Inter-Agency Coordinating Committee was created.

2. To request that these and other development agencies strongly support, financially and technically, the activities outlined in the Concept Paper annexed to Document CSP23/19, entitled "Child Health: Accelerated Immunization Program in the Americas. Phase II: 1991-1995."

3. To urge all Member Governments to assign the necessary funds for vaccine procurement in their national health budgets.

4. To reiterate that all Member Governments need to take strong measures to: a) eliminate the missed opportunities to vaccinate; b) achieve and maintain universal coverage with all vaccines included in the Expanded Program on Immunization; c) increase the measures aimed at the control of neonatal tetanus, particularly in those areas that are identified at high risk for this disease; and d) further strengthen the control of measles, building on the experience now being gained in the English-speaking Caribbean.

5. To emphasize to Member Governments that adoption of the new polio case classification and speeding up of the national weekly reporting system for flaccid paralysis will be critical for the consolidation of interruption of indigenous transmission of wild poliovirus.

6. To request that Member Governments make every effort to inform the population in general that PAHO has instituted a reward of US$100 to be given to any person that reports the first case of flaccid paralysis in a community that is proven to be due to the wild poliovirus, as a measure that will help increase the possibilities of early detection of probable cases of polio.

7. To request the Director:

a) To make every effort to sustain the activities needed to stop transmission of wild poliovirus by the end of 1990;

b) To take all steps needed to ensure agency coordination and necessary funding for the implementation of the Phase II of the project outlined in the Concept Paper, which will sustain and increase immunization coverage and further control the diseases preventable by vaccination;

c) To present a progress report on the findings of the International Certification Commission of polio eradication and the funding of Phase II to the 1991 Meeting of the Directing Council.

(Adopted at the sixth plenary session,
26 September 1990)

CHILDBEARING AGE WOMEN (CBAW) LIVING IN "MUNICIPIOS" OF HIGH RISK FOR NEONETAL TETANUS AMERICAS, 1988 - 1991

COUNTRIES	NO. OF "DISTRICTS"*	POPULATION OF CBAW
Argentina	34	480,607
Bolivia	26	383,886
Brasil	333	4.094,461
Colombia	224	2.175,239
Dominican Republic	10	286,793
Ecuador	23	345,462
El Salvador	22	174,604
Guatemala	49	341.594
Haiti	N/A	N/A
Honduras	22	526,351
Mexico	102	3,920,785
Nicaragua	29	350,000
Panama	5	105,064
Paraguay	31	109,768
Peru	40	1,326,998
Venezuela	18	168,276
Total	968	14,789,888

*"Municipios" or Districts

NOTE: List of "municipios" by country provided under separate cover.

STANDARD PROVISIONS FOR GRANTS TO PUBLIC INTERNATIONAL ORGANIZATIONS

1. Allowable Costs
2. Refunds
3. Revision of Grant Budget
4. Termination Procedures
5. Disputes
6. U.S. Officials Not to Benefit
7. Nonliability
8. Amendment
9. Notices
10. Publications
11. Audit and Records (Select and include only the applicable version as specified in the applicability statement of the provision.)
12. Payment (Select and include only the applicable version as specified in the applicability statement of the provision.)

1. ALLOWABLE COSTS (JULY 1988)

(a) The grantee shall be reimbursed for costs incurred in carrying out the purposes of this grant which are reasonable, allocable, and allowable.

(1) Reasonable shall mean those costs that do not exceed those which would be incurred by an ordinarily prudent person in the conduct of normal business.

(2) Allocable shall mean those costs which are necessary to the grant.

(3) Allowable shall mean those costs which are reasonable and allocable, and which conform to any limitations set forth in this grant.

(b) Prior to incurring a questionable or unique cost, the grantee is encouraged to obtain the grant officer's written determination as to whether the cost will be allowable.

2. REFUNDS (JULY 1988)

(a) The grantee is encouraged to utilize interest bearing accounts where feasible and shall remit to A.I.D. all interest earned on funds provided by A.I.D.

(b) Funds obligated by A.I.D. but not disbursed to the grantee at the time the grant expires or is terminated shall revert to A.I.D., except for such funds encumbered by the grantee by a legally binding transaction applicable to this grant. Any funds advanced to but not expended by the grantee at the time of expiration or termination of the grant shall be refunded to A.I.D. except for such funds encumbered by the grantee by a legally binding transaction applicable to this grant.

(c) If, at any time during the life of the grant, or as a result of final audit, it is determined that A.I.D. funds provided under this grant have been expended for purposes not in accordance with the terms of this grant, the grantee shall refund such amount to A.I.D.

3. REVISION OF GRANT BUDGET (JULY 1988)

(a) The approved grant budget is the financial expression of the grantee's program as approved during the grant award process.

(b) The grantee shall immediately request approval from the grant officer when there is reason to believe that within the next 30 calendar days a revision of the approved grant budget will be necessary for any of the following reasons:

(1) To change the scope or the objectives of the project and/or revise the funding allocated among project objectives.
(2) Additional funding is needed.
(3) The grantee expects the amount of A.I.D. authorized funds to exceed its needs by more than $5,000 or five percent of the A.I.D. award, whichever is greater.

(c) Except as required by other provisions of this grant specifically stated to be an exception from this provision, the Government shall not be obligated to reimburse the grantee for costs incurred in excess of the total amount obligated under the grant. The grantee shall not be obligated to continue performance under the grant (including actions under the "Termination Procedures" provision) or otherwise to incur costs in excess of the amount obligated under the grant, unless and until the grant officer has notified the grantee in writing that such obligated amount has been increased and has specified the new grant total amount.

4. TERMINATION PROCEDURES (JULY 1988)

This agreement may be terminated, in whole or in part, by either party at any time upon 30 days written notice of termination. Upon receipt of and in accordance with a termination notice from the grant officer the grantee shall take immediate action to cease all expenditures financed by this grant and to cancel all unliquidated obligations if possible. Further, upon receipt of notice of termination, the grantee shall not enter into any further obligations under this grant. Except as provided below, no further reimbursement shall be made after the effective date of termination. The grantee shall within 30 days of the effective date of termination repay to the Government all unexpended A.I.D. funds which are not otherwise obligated by a legally binding transaction applicable to this grant. Should the funds paid by the Government to the grantee prior to the effective date of termination be insufficient to cover the grantee's obligations in a legally binding transaction, the grantee may submit to the Government within 90 days after the effective date of termination a written claim for such amount. The grant officer shall determine the amount(s) to be paid by the Government to the grantee under such claim in accordance with the "Allowable Costs" provision of this grant.

5. DISPUTES (JULY 1988)
(a) Any dispute under this grant shall be decided by the A.I.D. grant officer. The grant officer shall furnish the grantee a written copy of the decision.

(b) Decisions of the A.I.D. grant officer shall be final unless, within 30 days of receipt of the decision of the grant officer, the grantee appeals the decision to the Administrator of A.I.D. Any appeal made under this provision shall be in writing and addressed to the Administrator, Agency for International Development, Washington, D.C. 20523. A copy of the appeal shall be concurrently furnished to the grant officer.

(c) In connection with any appeal proceeding under this provision, the grantee shall be given an opportunity to be heard and to offer evidence in support of its appeal.

(d) A decision under this provision by the Administrator or an authorized representative shall be the final decision of A.I.D.

6. U.S OFFICIALS NOT TO BENEFIT (JULY 1988)
No member of or delegate to the U.S. Congress or resident U.S. Commissioner shall be admitted to any share or part of this grant or to any benefit that may arise therefrom.

7. NONLIABILITY (JULY 1988)
A.I.D. does not assume liability for any third party claims for damages arising out of this grant.

8. AMENDMENT (JULY 1988)
The grant may be amended upon mutual consent of the parties by formal modifications to the basic grant document or by means of an exchange of letters between the grant officer and an appropriate official of the grantee.

9. NOTICES (JULY 1988)
Any notice given by A.I.D. or the grantee shall be sufficient only if in writing and delivered in person, mailed, or cabled as follows:

To the A.I.D. grant officer, at the address specified in the grant.

To grantee, at grantee's address shown in the grant or to such other address designated within the grant.

Notices shall be effective when delivered in accordance with this provision, or on the effective date of the notice, whichever is later.

10. PUBLICATIONS (JULY 1988)
(This provision is applicable when publications are financed under the grant.)

(a) If it is the grantee's intention to identify A.I.D.'s contribution to any publication resulting from this grant, the grantee shall consult with A.I.D. on the nature of the acknowledgement prior to publication.

(b) The grantee shall provide the A.I.D. project officer with one copy of all published works developed under this grant and with lists of other written work produced under the grant.

(c) Except as otherwise provided in the terms and conditions of the grant, the author or the recipient is free to copyright any books, publications, or other copyrightable materials developed in the course of or under this grant, but A.I.D. reserves a royalty-free nonexclusive and irrevocable right to reproduce, publish, or otherwise use, and to authorize others to use the work for U.S. Government purposes.

11. AUDIT AND RECORDS (STANDARD) (JULY 1988)
(This provision is applicable when A.I.D. is not the sole contributor to the grant program.)

The grantee shall maintain books, records, documents, and other evidence in accordance with the grantee's usual accounting procedures to sufficiently substantiate charges to the grant. The Grantee confirms that this program will be subject to an independent audit in accordance with the Grantee's usual auditing procedure, and agree to furnish copies of these audit reports to A.I.D. along with such other related information as may be requested by A.I.D. with respect to questions arising from the audit report.

12. PAYMENT (LETTER OF CREDIT) (JULY 1988)
(This provision is applicable when a Letter of Credit is requested by the grantee and approved by A.I.D.'s Office of Financial Management.)

(a) Payment under this grant shall be by means of a Letter of Credit (LOC) in accordance with the terms and conditions of the LOC and any instructions issued by the A.I.D. Office of Financial Management, Program Accounting and Finance Division (M/FM/PAFD).

(b) As long as the LOC is in effect, the terms and conditions of the LOC and any instructions issued by M/FM/PAFD constitute the payment conditions of this grant superseding and taking precedence over any other clause of this grant concerning payment.

(c) If the LOC is revoked, payment may be made on a cost-reimbursement basis, in accordance with paragraph (e) of this clause.

(d) Revocation of the LOC is at the discretion of M/FM/PAFD after consultation with the grant officer. Notification to the recipient of revocation must be in writing and must specify the reasons for such action. The recipient may appeal any such revocation to the grant officer, in accordance with the Disputes clause of this grant. Pending final decision, payments under the contract will be in accordance with paragraph (e) of this clause

(e) If the LOC is revoked, the grantee shall submit to the A.I.D. Controller an original and 3 copies of SF 1034, "Public Voucher for Purchases and Services Other Than Personal" and SF 1034A, Continuation of SF 1034, normally once a month, but in any event no less than quarterly. Each voucher shall be identified by the grant number and shall state the total costs for which reimbursement is being requested.