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Report on the progress and components of the health research policy proposal: Results of the survey on technical cooperation in health research during 2006

Pan American Health Organization
2007

Report on the progress and components of the proposal ….

Original: Spanish/English

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Summary:

This paper is a continuation and addition to the one submitted to the ACHR´s 40th meeting, entitled "An overview of health research policies in the Americas and a proposal for the development of a health research policy for the Organization"

Based upon the knowledge gaps identified in that paper as limitations to the development of a PAHO/WHO research policy, a survey was carried out on the situation of health research policy at PAHO, aimed at country Representations and heads of Units, Areas and Centers. Its main objective was to know the research-related activities performed by the Organization, their relationship to national research policies and the demand for health research-related activities by Member States.

The overall response rate was low (39.4%), with only 35.7% for country Representations and 28.6% for Centers. The most complete information was obtained from Areas and Units depending directly from the Assistant Director. Due to this, no definitive conclusions could be derived, and it was decided that only a descriptive presentation of the information obtained should be made.

Having said that, we can see that all responding Representations inform to have carried out research-related activities and that these are included in a large percentage of the Country Cooperation Strategy papers. An important discrepancy amongst responses from different actors was also found, as well as a multiplicity of research subjects, with concentration in some countries and a worrisome situation regarding the ethical review of research projects.

Considering these findings, the paper stresses the importance of having an Organization-wide research project inventory and the need for an institutional research policy. The need to continue working in the field of research ethical review is particularly stressed.

The paper points out the wealth of information available at Representations and proposes some strategies to taper into it. Some other presently ongoing processes aimed at responding to countries´ health research demands and to decrease knowledge gaps on the situation of health research in the Region are also briefly identified.

Report on the progress and components of the health research policy proposal: Results of the survey on technical cooperation in health research during 2006*

Background

In the 40th Meeting of the Advisory Committee on Health Research (ACHR), held in Montego Bay, Jamaica from 29 April to 1 May 2007, the document "An overview of health research policy in the Americas and a proposal for PAHO/WHO's research policy"[1] was presented. The document included a review of the principal global and regional milestones in the development of health research policies, recognition of several of the main stakeholders, and the definition of key concepts about the topic in recent literature. It also presented the results of a review of the electronically available information on National Health Research Systems, including regulatory agencies for scientific and health research, the existence of national priorities on research, financing, scientific output, and access and utilization of scientific knowledge on health.

Based on this information, the document outlined a proposal for the role of research in PAHO/WHO operations and cooperation. Heading A of the proposal -- "Define the Organization's research policy, the instruments and tools for its implementation and monitoring" -- listed four points:

1. Context of research policy;
2. Determine the Region's knowledge production and use;
3. Determine country needs and their capacity to address them;
4. Establish the demands for research cooperation.

The document also identified some gaps in knowledge that need to be bridged in order to provide appropriate technical cooperation:

a) *The functions of different national actors in the stewardship of National Research Systems.*
b) *What research PAHO/WHO carries out and funds through its different Areas, Units, Centers, and Country Offices, as well as their priority setting mechanisms.*
c) *What are the countries' demands for cooperation in health research and PAHO/WHO's response to these demands.*

* Document prepared by Dr. Delia M. Sánchez.

[1] 40ª Meeting of the Advisory Committee on Health Research (ACHR), Montego Bay, Jamaica, 29 April to 1 May 2007: An overview of health research policy in the Americas and a proposal for PAHO/WHO/s research policy, http://www.paho.org/English/DD/IKM/RC/ACHR-2007-40-05-Policy.pdf

Item 1 of the final recommendations at the 40th Meeting of the ACHR supported continuing the preparatory work on research policy and the commitment to endorse this work to ensure that a carefully worded draft on research policy can be discussed by the Member States, interested parties in the countries, and international organizations as part of a broad consultation exercise that will take place in April 2008.

The present document complements the previously mentioned one, and aims at reducing the knowledge gaps detected in that paper and assessing ACHR results with regard to progress in the design of a PAHO research policy.

Survey on research cooperation in PAHO/WHO Areas, Units, Centers, and Country Offices

1. **Objectives**

Main objective: Determine the research-related activities conducted by the Organization, their relation to national research policies and Member States' demand for health research activities.

Secondary objective: Verify the previously collected information on national health research systems through review of available documentation on the Internet.

2. **Methodology**

A descriptive study of PAHO research activity was conducted. A questionnaire was designed, which was discussed with ACHR members; it consists of two parts: one for Areas, Units, and Centers, and another for Country Offices. (See Annex 1) Most of the questions are in the YES/NO format with additional space for written answers, except for the lists of completed or funded research, for which a grid was presented with various items relevant to each research project.

The questionnaire was sent electronically on 19 June 2007 to all the departments of the Organization (for a total of 71 recipients) by the Assistant Director, Dr. Carissa Etienne, who requested a response before 13 July. Given the low response rate, the Assistant Director sent a second request on 6 August 2007 to those who had not responded.

3. **Results**

A total of 28 responses were received, which represents a response rate of 39.4%. Responses can be grouped into the following categories: 10 Country Offices (Belize, Brazil, Colombia, Cuba, El Salvador, Guatemala, Honduras, Mexico, and Uruguay) from a total of 28 existing Country Offices

(35.7%), 2 responses from Centers (CEPIS and PANAFTOSA) out of a total of 7 Centers (28.6%), and 16 responses from Areas and Units out of a total of 36 (44.4%), although in the case of the offices reporting to the Office of the Director of Administration, all the unit chiefs responded on behalf of their Units, since they do not carry out research-related activities. (For clarification, the PAHO organizational chart is included in Annex 2.)

The low response rate and the degree of diversity found do not allow the results to be averaged or conclusive answers to be determined with regard to PAHO research activities, which led to the decision to present this information descriptively. Although the descriptive format has limitations, it can help illustrate some strengths and weaknesses in PAHO's participation in technical cooperation in Health Research.

3.1 Research activities reported by PAHO/WHO Country Offices:

Among the Country Offices that responded to the survey, two are from countries with high production of research in the Latin American context (Brazil and Mexico), while the remaining countries have average and low levels of health research production (at least in terms of the production represented by the indexed scientific literature). It should be noted that no English-speaking countries in the Caribbean responded to the survey.

Eight of the ten Country Offices report some research activity during 2006. Only six Country Offices answered the question on the source of the initiative, and only one indicated that the majority of the initiative came from the country, while in the rest, total or partial initiative was attributed to the Organization.

Five of the ten Country Offices report research training activities for personnel and in these cases the initiative arose from PAHO/WHO, solely or along with other international partners such as the Centers for Disease Control and Prevention (CDC).

In terms of research training activities for in-house personnel, only the Country Offices of Cuba and Guatemala report having carried out some activity of this type. Both questions were open, allowing inclusion of every activity that the PAHO/WHO Representatives understood to contribute to research training.

The Country Offices of Belize, Brazil, Cuba, Guatemala, and Mexico recognize the existence of national health research priorities, while the responses from the Country Offices of Colombia, El Salvador, Honduras, and Uruguay were negative; Panama did not respond. These responses show discrepancies with the information collected in the literature search and included in the previously mentioned document (presented at the 40th Meeting of the ACHR), except in the cases of Belize, El Salvador, and

Guatemala, where information on health research priorities had not been previously obtained. **Table 1** lists countries where national-level health research priorities were identified through a literature search and those where research priorities were identified through the survey of PAHO/WHO Country Offices.

Table 1. Identification of health research priorities through a literature search and through the survey of PAHO/WHO Country Offices

Country	Existence of health research priorities identified through literature search		Existence of health research priorities identified through survey of PAHO/WHO Country Offices		
	YES	NO	YES	NO	NO RESPONSE
Argentina	X				X
Belize		X	X		
Brazil	X		X		
English-speaking Caribbean	X				X
Cuba	X (only its existence)		X		
Chile	X				X
Colombia		X		X	
El Salvador	X (Univ.)			X	
Guatemala		X	X		
Honduras		X		X	
Mexico	X		X		
Panama					X
Peru	X				X
Uruguay		X		X	

Table 2 summarizes part of the information provided by the Country Offices on research projects that were implemented or financed by PAHO/WHO in 2006. The blank boxes indicate that no information was available. Note that this is the case for a significant proportion of the information on research costs as well as funding sources (PAHO vs. outside sources). In some cases the funding source was clearly included in the completed survey. In the rest, it is reasonable to assume that when the name of a U.N. agency or developed country is included under the column "Other participants," it has helped finance the project, but the specific amount of the contribution can not be determined.

Table 2. Characteristics of research projects implemented or financed byPAHO/WHO Country Offices in 2006

Country	Research project	Principal researcher	Cost (US$)	Other participants
Belize	Study of Diabetes, hypertension and Risk factors	Dr. Alberto Barcelo (PAHO - WDC)	US$32,235	
	Assessment of pilot national health insurance roll out			
Brazil	Telematics and telemedicine project in support of primary health care in Brazil (five projects)			BIREME Pernambuco, Amazonas, Rio de Janeiro, Santa Catarina
	Monitoring Human Resources in Health	20 national work stations (not identified)		
	Pan-Amazon Network of science, technology, and innovation	Edmundo Cock FIOCRUZ		
	Research and development project: phytoremediation through the use of bamboo	Fernando Antonio Rodríguez INTERAGUAS		
	Network on Human Resource Observation & subregional consortia in Latin America	NESCON		
	Projects reported by HDM/CD (see below)			
Colombia	----------	----------	----------	----------
Cuba	----------	----------	----------	----------
El Salvador	Baseline maternal mortality 2005-2006	Dr. Douglas Joaquín	US$39,800	CDC, UNFPA
Guatemala	Central American initiative on diabetes: quality of care for people with hypertension	Dr. Judith Cruz (MPH)	US$1,500	INCAP
	Improved availability of safe blood in Guatemala	Nat'l program of transfusion medicine and blood banks	US$6,000	------
	Beliefs, attitudes, and practices concerning consumption of food and supplements with folic acid	Faculty of Medicine Univ. of San Carlos	US$10,400 (PAHO: $5,200)	CONCYT (through FONISAL)
	Human health risks from DDT and its metabolites	Lic Jaime Juárez (PAHO - GUT)	US$475,700 (PAHO:	GEF, UNEP, MSPAS,

Country	Research project	Principal researcher	Cost (US$)	Other participants
			$244.800)	MARN, Min of Education and local authorities. Other countries: MEX, BEL, ELS, HON, NIC COR, and PAN
	Use of fish as biological control of the immature phases of malaria	Lic Jaime Juárez (PAHO-GUT)	US$475,000 (PAHO: $60,000)	MSPAS, MARN, and Central American countries and Mexico
	Consumer satisfaction surveys	Two health areas	US$4,577	Health areas
	Characteristics of the nursing workforce in Guatemala	Three nursing faculties, Min of Health, IGSS, Nat'l Nurs.Assoc.	US$13,000	Cited
	Building the future of public health in Guatemala	Dr. G Estrada Univ. of San Carlos, Rafael Landivar, of the Valley, Min of Salt, IGSS, UNDP, PAHO/WHO	US$228,000 (IDRC)	IDRC, UN
Honduras	Documenting social exclusion in health			
	Study of health expenditure and financing			
	Effectiveness of the community AEPI strategy in San Luis, Honduras			
	Existing relationships between HIV/AIDS and domestic violence in a sample of 18-49-year-old women, patients at the comprehensive care clinics…			
	Pilot study to establish a data baseline using multidisciplinary interventions to improve maternal and child health in rural regions in Honduras…			
	Efficacy of chloroquine and sulfadoxine-pyrimethamine for the treatment of			

Country	Research project	Principal researcher	Cost (US$)	Other participants
	uncomplicated Plasmodium falciparum malaria in three municipios			
Mexico	Risk assessment for the construction of the Arcediano Dam	PAHO, Autonomous SLP Univ.	US$200,000 (PAHO: $12,134)	Jalisco Water and Sanitation Commission
	Baseline survey to measure the efficacy of malaria prevention strategies		US$170,000 (OPS: $12,134)	GEF, UNEP
Uruguay	Risk factors of chronic non-communicable diseases			
	Atraumatic Restorative Treatment (PRAT) in Canelones			
	Adolescent health: survey on smoking			
	Adolescent health: survey on protection factors			
	Prevalence of HIV/AIDS in prisons			
	Pharmaceutical care			
	Study of human resources in the health sector			
	Mental health services			

It is interesting to note that several Country Offices indicated the existence of projects being implemented in an entire subregion, but the information collected in the reports from the remaining participating countries did not confirm such subregional projects. The information collected apparently shows that certain research topics tend to be concentrated in several countries, but the low response rate does not allow valid conclusions to be drawn.

According to information collected but not included in the table, the initiative for most completed or funded research projects arises from PAHO or other international sources of financing in the cases of Belize, El Salvador, and Honduras; while in the cases of Brazil, Cuba, Guatemala, Mexico, and Uruguay, it is reported that the initiative stems from the health authorities or jointly between PAHO and the health authorities. Colombia and Panama did not answer this question.

Table 3 shows the research projects reported by the Country Offices grouped according to subjects and types of research, revealing a strong concentration in epidemiological research.

Table 3. Subjects and types of research reported by Country Offices

Research topics	Type of **research**			
	Basic research	**Applied research**	**Epidemiological research**	**Secondary research**
Communicable diseases	1		3	
Chronic noncommunicable diseases			2	1
Maternal and child health		1	2	
Sexual and reproductive health				
Gender and health			1	
Mental health				1
Oral health		1		
Animal health				
Environment and sanitation		1	2	
Health economics		1		
Human resources in health		4		
PHC				
Health systems		1		4
Drugs		2		
Social determinants of the health-disease process		1		1
Dissemination of knowledge				
Population groups			2	
Total	1	13	12	7
No. of projects related to MDGs: 10 **Projects that do not seem to be research projects: 2**				

The topics of the reported research projects are framed within the research priorities identified by Brazil,[2] Mexico,[3] and the University of El Salvador,[4] as cited in the document "An overview of health research policy in the Americas and a proposal for PAHO/WHO's research policy."

The survey provided information on numerous funding sources for research, as presented in **Table 4**. A significant number of international sources of financing are observed in the countries with lower per-capita income levels. This trend can be attributed to the donor countries' policies on development financing, which often exclude the middle-income countries. This could appear to contradict the fact that the centers of excellence in the higher-income countries are capable of obtaining greater resources through competitive means in a world in which science tends to globalization, which means that it is reasonable to assume that those resources have not been taken into account by those who responded to the survey. It is worth noting

[2] Ministry of Health, Secretariat of Science, Technology and Strategic Inputs.
Department of Science and Technology, National Agenda of Health Priorities and Research, Series B. Textos Básicos em Saúde ["Basic Texts in Health"] Editora MS Brazil DF 2005.
[3] Mexico: SSA/IMSS/ISSSTE-CONACYT Sectoral Fund for Research in Health and Social Security, Call for bids 2006/01
[4] Rafael Cedillos. Center for Research and Development in Health CENSALUD: Biotecnologías al servicio de El Salvador ["Biotechnology at the service of El Salvador"], University of El Salvador, 2005.

that in the case of Brazil; only national sources (public and private) were identified.

Table 4. Sources of financing for health research as identified by the Country Offices

Country	Sources of financing		
	National sources	**United Nations**	**Other international sources**
Belize		UN	Inter-American Development Bank, other donors
Brazil	Min Educ, Min Comm. & Tech., Min Health, private sector		
Colombia	COLCIENCIAS		USAID, AIDS Canada, GTZ
Cuba	Ministry of Health		
El Salvador		PAHO, UN	CDC, Grand Duchy of Luxembourg, JICA, AECI
Guatemala	CONCYT, Univ of S. Carlos		USAID, CIDA, JICA, Norway, Sweden, Spain, IDRC
Honduras	Public sector: payment of researchers' wages	UN	USAID, others
Mexico	CONACYT, FUNSALUD, CINVESTAV, Fund. MSSI	UN, WHO	World Bank, Inter-American Development Bank, Kellogg Foundation, Ford Foundation, GEF, USAID
Panama	No response		
Uruguay	CONICYT, PEDECIBA		IDRC, the European Union

It is interesting to note the case of institutions such as the Inter-American Development Bank (IDB), the Organization of American States (OAS), or the World Bank (WB). Only the Country Offices of Belize and Mexico aknowledge the IDB as funding research, even though during the last two decades, it has made a significant investment in Science and Technology in the majority of countries in the Region, and it provides the basis of operating funds for a considerable number of national science and technology organizations (ONCYTs) in Latin America.

A list of these projects, taken from the Inter-American Development Bank's website[5], is presented in **Annex No. 3**. A review of the summarized descriptions of each project provided in the site verified that most projects included a research component in the areas of health or health-related basic sciences.

The World Bank presents a similar situation; the agency has increased its presence in the health sector through numerous loans, including a research component. **Annex No. 4**, which was developed using data from the Bank's website[6], shows which projects the organization approved and classified under "health" from 1998 to 2007. Out of a total of 409 projects approved for Latin America and the Caribbean during that

[5] Inter-American Development Bank. List of Science and Technology projects funded. Available online at: http://www.iadb.org/projects/Project.cfm Accessed: 11/7/2007

[6] World Bank. List of projects. Information available online at: http://web.worldbank.org/WBSITE/EXTERNAL/PROJECTS/0,,menuPK:115635~pagePK:64020917~piPK:64021009~theSitePK:40941,00.html Accessed: 19/11/2007

period, 84 pertain to health. If projects on sanitation or urban development issues are included, the number is much greater.

The Organization of American States (OAS) is not identified either, although this Body also plays an active role in promoting the Region's science and technology policy through strengthening national science and technology organizations.[7] [8]

Data on the dates of approval by the PAHO Ethical Review Committee on research could not be obtained from any of the research projects reported by the Country Offices. The list sent by the County Office of Honduras mentions an approval by a local Ethics Committee; in the case of Mexico it is explicitly indicated that approval was not necessary, and in Guatemala, either a review by a local Ethics Committee is indicated or in other cases, that there was no need for review. One of the responses received identifies the ethical review process as one of the barriers to conducting research activities and reports that a different contract format is used as a way of overcoming this obstacle.

The information obtained through the survey contrasts with that provided by the PAHO Ethical Review Committee (PAHOERC), as may be observed in Table No. 5. The number of projects reported each year is influenced by the fact that all Research Grant Program projects were reviewed by the Ethical Review Committee, but the Grant Program ended in December 2005. It is also worth noting that the Committee was restructured in June 2006. Furthermore, in April 2007 a Directive was distributed to all divisions of the Organization indicating that the ethical review process is an integral part of the research development process.

Table No. 5 Research Projects presented to PAHOERC by country, by year

Requests for review by PAHOERC		
Country	**2005-2006**	**2007**
Argentina	10	4
Brazil	17	3
Belize	1	1
Bolivia	7	1
Chile	2	1
Costa Rica		1
Cuba		1
Dominican Republic		1
El Salvador		1

[7] OAS: Declaration of Lima. First Meeting of Ministers and High Authorities of Science and Technology. November 11-12, 2004. Lima, Peru. OEA/Ser.K/XVIII REMCYT-1/DEC.1/04. Available online at : http://www.science.oas.org/Ministerial/ingles/cpo_plande.asp Accessed: 11/19/2007

[8] OAS: Plan of Action of Lima. First Meeting of Ministers and High Authorities of Science and Technology. November 11-12, 2004. Lima, Peru OEA/Ser.K/XVIII REMCYT-1/PLAN.1/04. Available online at: http://www.science.oas.org/Ministerial/ingles/cpo_plande.asp. Accessed: 11/19/2007

Ecuador	2	
France	1	
Border/El Paso	3	
Guatemala	2	1
Honduras	1	
Jamaica	1	
Mexico	9	8
Nicaragua	2	1
Paraguay	3	2
Peru	5	4
Uruguay	4	
Venezuela	3	1
Trinidad and Tobago	1	
Regional	6	2
Total	**80**	**33**

Source: PAHOERC

Another question in the survey asked if health research cooperation activities were included within Country Cooperation Strategy (CCS) documents, which are jointly developed by Country Offices and Health Authorities in order to plan the medium-term PAHO/WHO cooperation. Of those that responded, only 4 countries (Brazil, Cuba, Panama and Uruguay) answered affirmatively. **Table No. 6** shows the research content included in CCS documents from the countries that responded to the survey and the responses received, which in some cases conflict. For example, the TCC between Costa Rica, Brazil, and Chile to strengthen the health information system and evidence-based decision making in Costa Rica was not reported. Work in EVIPNet was also not included, even though 10 country offices actively participate in the network.

Table No. 6: Research-related content within Country Cooperation Strategy Documents

Country	Response to survey	**Issues on Health Research and using health evidence within technical cooperation agreements.** Source: CCS and/or executive summaries.
Belize	No	
Brazil	Yes	"Support the development of science and technology, emphasizing public health determinants and the dissemination of knowledge at the national and international levels; implement policies, projects, and programs based on these results" "Strengthen country's capacity to manage knowledge in the health field….."

Colombia	No	"Development of national systems for public health surveillance, health situation analysis, and applied research capability, as well as their implementation at the subnational level to guide and monitor progress toward meeting the priority MDGs"
El Salvador	No	"A health observatory that enables the strengthening of health information for evidence-based decision making" "Operations research on public health problems and on health systems and services"
Guatemala	No	"Contribute to strengthening technical and management aspects of the Ministry of Public Health and Social Assistance (MSPAS), enabling it to lead the sector and conduct the essential functions and funding of public health" "Promote the sustainable and adequate management of social-sanitary and health information to strengthen decision making in national priorities to meet international commitments" "Strengthen the development and transfer of technical knowledge to address the country's health challenges"
Honduras	No	
Mexico	No	" … support research on traditional medicine" "Technical cooperation with the SSA, public health institutions, and research institutes to ensure active epidemiological surveillance of neglected communicable diseases; maintain surveillance, prevention, and control of infectious diseases, vaccine-preventable diseases, and noncommunicable diseases such as diabetes, hypertension and cancer"
Panama	Yes	"Strengthen the system of information and development of the sanitary intelligence"
Uruguay	Yes	"Promotion of Public Health Research"

Source: CCS and/or executive summaries obtained from the Country Support Unit webpage (PAHO)

Furthermore, in response to the question on receiving specific requests for cooperation in health research, only Honduras reported that it had not received any (but in this case PAHO co-financed the national agency that funds health research) and Panama did not respond.

Table No. 7 shows the requests for cooperation in health research reported by Country Offices. The responses show that requests are varied and on specific subjects, and it is interesting to note that in the cases of Brazil, Guatemala, Uruguay, and of the Technical Cooperation Among Countries (TCC) between Cuba and El Salvador, requests focus on research systems.

Table No. 7 Requests for cooperation in research

Country	Requests for research cooperation

Belize	Diabetes, evaluation of extending the pilot project on national health insurance. Evaluation of health system reform (currently in discussion)
Brazil	Support for scientific events, S&T consultants for the Ministry of Health, transfer of funds for priority research
Colombia	Yes, but does not describe
Cuba	TCC with El Salvador for strengthening the S&T system, international workshop, exchange of researchers
El Salvador	Maternal mortality baseline
Guatemala	Participation in the fund for public health research (FONISAL)
Honduras	No
Mexico	Epidemiological research, policy and health systems research, PhD fellowships
Panama	Did not respond
Uruguay	Strengthening capacity for ethical review of research, support for research on risk factors for chronic diseases

The questionnaire included a question on any difficulties or limitations faced when responding to requests for research cooperation. The majority of responses referred to a lack of economic and human resources at the Country Office level and in some cases, to the lack of specialized human resources in the country.

3.2 Research activities reported by Areas, Units, and Centers

All of the Areas under the Office of the Director of Administration (Information Technology Services, Financial Management and Reporting, Human Resources Management, General Services Operations, and Procurement Services) reported that they do not conduct or fund research activities. The Areas of Governance, Policy and Partnerships and of Planning, Program Budget and Project Support reported the same response.

The information analyzed pertains to the following Units and Centers, which are presented under their corresponding Area for greater clarity.

Family and Community Health (FCH):
- Child and Adolescent Health (CA)
- Immunization (IM)
- HIV/AIDS

Health Surveillance and Disease Management (HDM):
- Veterinary Public Health (VP)
- PANAFTOSA
- Communicable Diseases (CD)

Sustainable Development and Environmental Health (SDE):
- Health Determinants and Social Policy (HS)
- CEPIS & Basic Sanitation (CEPIS/BS)

Technology and Health Services Delivery (THS):

Mental Health, Substance Abuse, and Rehabilitation (MH)
Health Systems Strengthening (HSS):
Human Resources Development for Health (HR)

It should be noted that in the case of PANAFTOSA and the Veterinary Public Health Unit a joint response was received, and in the case of the Communicable Diseases Unit, the response included activities conducted by the Program for Research and Training in Tropical Diseases (TDR).
It should also be noted that the Unit on Health Determinants and Social Policy was created in 2007.

The Research Promotion and Development Unit operates within the Health Systems Strengthening Area. While it did not seem appropriate to include it in the survey, as by definition its entire operation is related to research, it is important to note that in 2006, the unit carried out a significant number of activities to strengthen research efforts, both within and outside of the Organization, many of which have been presented to the ACHR on different occasions.

All of the Units and Centers that responded to the survey report having completed or funded research projects in 2006 (with the exception of HS, which was explained above). None of them reported having conducted training activities for their own staff on research issues.

In terms of conducting training activities on research for non-members of their staff, three Units and the two Centers reported various activities, as may be observed in **Table No. 8.**

Table No. 8. Research training activities conducted by Units and Centers in the year 2006

Unit or Center	Content of **training**
CEPIS/BS	Research methodology, environmental samples, removal of heavy metals from water
PANAFTOSA	Burden and impact of food-borne diseases, systematic revisions, laboratory techniques in immunobiology
Communicable diseases	Research methodology, developing protocols, MS and PhD fellowships in tropical diseases, laboratory techniques, writing scientific work, research ethics, clinical research
Child and Adolescent Health	Did not conduct
HIV/AIDS	Did not conduct
Immunization	Studies on cost-effectiveness of introducing vaccines
Mental Health	Research methodology, designing projects, depression, psychotic disorders
Human Resources Development for the Health	Did not conduct
Health	Not applicable

Determinants and Social Policy	

With regard to research priorities in the Areas, Units, or Centers, it is interesting to verify that although only 3 (CEPIS, Communicable Diseases and Human Resources Development) answer positively in terms of defining research questions in 2006, 5 have identified priority areas or issues (CEPIS, Communicable Diseases, Child and Adolescent Health, and HIV/AIDS). (See **Table No. 9**)

Table No. 9 Priority research topics identified by Units and Centers

Unit or Center	Priority research topics
CEPIS/BS	Consumption of pigs fed with refuse, dumping of leachates
PANAFTOSA	Did not respond
Communicable diseases	Chagas disease, TB, onchocerciasis and filariasis, neglected diseases, MDG, helminths transmitted through soil and schistosomiasis, parasitic diseases, Leishmania and malaria, leprosy, multidrug therapy
Child and Adolescent Health	gender, human rights, HIV/AIDS, TB, sexual and reproductive health, ethnic groups and vulnerable youth
HIV/AIDS	Operational research to monitor patients in antiretroviral treatment, validating study on HIV incidence, operations research on preventing mother-to-child transmission, research on male circumcision on men who have sex with men, HIV behavior surveillance
Immunization	no
Mental Health	did not respond
Human Resources Development for Health*	migration, health workers' health situation, PH workforce, methodologies of HR planning, working conditions and health careers, competencies in PHC, and international health
Determinants of Health and Social Policies	social determinants, urban health, local development

* Priorities cited as research questions not reached by consensus

Research production or funding: three Units did not carry out activities in this area in 2006: Immunization, Mental Health, and Health Determinants and Social Policy. As stated earlier, the latter Unit was created in 2007 and should therefore not be included in this analysis. The remaining Units and especially the two Centers report a significant amount of research, as may be observed in **Tables No. 10 and 11**, which also identify the primary author (and the affiliated Institution) and other institutions or participating countries. It is unfortunate that there is no information available from the remaining Centers, given the dedication to research that characterizes PAHO Centers. For this reason, some subjects are underrepresented in this analysis. Although the survey requested

information on the cost of research projects, very limited information was received, and this was omitted from the analysis for the time being.

Table 10: Research projects conducted or financed by areas and units during 2006

RESEARCH PROJECT	PRINCIPAL INVESTIGATOR	OTHER PARTICIPANTS
DETERMINANTS OF HEALTH AND SOCIAL POLICY		
----------	----------	----------
IMMUNIZATION		
----------	----------	----------
MENTAL HEALTH, SUBSTANCE ABUSE, AND REHABILITATION		
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HEALTH HUMAN RESOURCES		
Health worker migration studies	Silvina Malvarez	ARG, CHI, PAR, PER, BOL, VEN, COL, ECU, BRA
Characterization of Public Health Workforce		2 countries (unidentified)
HIV-AIDS INFECTION		
Access to ARV treatment and comprehensive care for PLHA in LAC	REDLA+ Oswaldo Rada	UNAIDS ECU, COL, DOR
CHILD AND ADOLESCENT HEALTH		
Data on sexual and reproductive health of adolescent and young adults	Allan Guttmacher Institute	AGI, Inst. nacionales de estadística GUA, NIC, HON
Epidemiological data available on HIV epidemic in youth of the Americas	Joao Pinto, Univ. of Texas	Region
Database on adolescent health and development	Sergio Muñoz. Univ de la Frontera, Chile	Region
Evaluation of national adolescent programs	Olga Nierenberg	Region
Evaluation of impact of Interagency Program for Empowerment of Adolescent Women	Instituto de Investigación y Desarrollo en Prevención de la Violencia y Promoción de la Convivencia Social. Univ del Valle, Colombia	El Salvador FAO, PNUD, UNFPA, UNICEF
Evaluation of impact of adolescents and soccer project: where masculinity plays	PAHO	Cruyff Foundation ARG, CHI, MEX,BRA, VEN, URU
Evaluation of impact of Strengthening Families with Teens initiative: love and limits	PAHO	UNICEF, WHO Iowa Strengthening Families

		Program NIC, EL SAL, ECU, DOR, BOL, PER
Coverage tool initiative	PAHO	WHO, UNAIDS NIC, ELSAL, ECU, DOR, BOL, PER
COMMUNICABLE DISEASES (HDM/CD)		
Impact of HIV on epidemiology of tuberculosis in Uruguay	NTP	CDC URU
Quantification of delay in diagnosis and treatment of tuberculosis cases–Paraguay	Hospital Mennonita Km 81	CDC PAR
Evaluation of DOTS Strategy in a high incidence area–retrospective information analysis study	U. del Cauca	CDC COL
Tuberculosis drug resistance surveillance survey	CENA VECE IHEF CENIS MI	USAID CDC MEX BRA DOR
Epidemiological profile of neglected infectious diseases in the indigenous populations of Latin America and the Caribbean	Dr. C. Rojas Univ Antioquía	COL
Control of Chagas disease transmission by non-domiciliated triatomines in the Yucatan peninsula (Mexico)	Gourbiere, Sébastien Université de Perpignan Via Domitia -	TDR/WHO France
Irrigation and surveillance strategies map for elimination of *Triatoma infestans* in Tucumán, Argentina	Cecere, Maria Carla Facultad de Ciencias Exactas y Naturales - UBA--	TDR/WHO ARG
Stratification of domestic *T. cruzi* transmission risk as a consequence of nearby sylvatic populations *R. prolixus*	Sanchez Martin, Maria De Jesus Centro Nacional de Referencia deFlebotomos y otros vectores BIOMED-UC	TDR/WHO VEN
Transmission Dynamics of *Trypanosoma cruzi* Chagas 1909, in the Microregion of the Rio Negro, Amazon Region, Brazil	Junqueira, Angela C.Veríssimo FIOCRUZ	TDR/WHO BRA
Entomological surveillance: Double adhesive tape method phase and school survey as tools for detection of Triatominae in low vector densities	Rojas Cortez, Mirko Programa Nacional de Control de Chagas, PNCCH	TDR/WHO BOL
Evolution and management of insecticide	Picollo, Maria Ines	TDR/WHO

resistance in *Triatoma infestans* populations in Argentina and Bolivia	Centro de Investigaciones en Plagas e Insecticidas (CITEFA-CONICET)	ARG
Wild foci of *Triatoma infestans*: occurrence, ecology, spatial structuration, colonization potential of new environments	Noireau,François Institut de Recherche pour le développement (IRD)	TDR/WHO France/BOL
Cost-effectiveness comparison for control methods of peridomestic populations of *Triatoma infestans* in the Chaco region	Gorla, David Eladio CRILAR - Centro Regional de Investigaciones y Transferencia Tecnológica	TDR/WHO ARG
An entomological assessment of Triatomine populations in Southern Belize	Dumonteil, Eric Universidad Autonoma de Yucatan	TDR/WHO MEX
Risk-stratification for *Triatoma dimidiata* control in Guatemala	Davies, Clive Richard London School of Hygiene & Tropical Medicine	TDR/WHO England
Domestic and peri-domestic population control of Triatominae in the province of Loja, Ecuador	Grijalva, Mario Pontificia Universidad Católica del Ecuador	TDR/WHO ECU
HDM/CD/MALARIA RAVREDA		
Therapeutic efficacy of malaria drug surveillance studies	A. Couto y otros SVS/MS Fac SEAMA Secret Saúde	USAID BOL, BRA, COL, ECU, GUY, PER, SUR, VEN
Evaluation of compliance with treatment for uncomplicated malaria caused by *P. falciparum* with 3 days of quinine, 5 days of doxycycline, and primaquine the 5th day	R. La Corte SVS/MS Secretaría de Saúde do Pará	USAID BOL, BRA, COL, ECU, GUY, PER, SUR, VEN
Evaluation of impact of environmental conditions in the Brazilian Amazon region on diagnostic performance of rapid malaria diagnostic tests	R. La Corte	USAID BOL, BRA, COL, ECU, GUY, PER, SUR, VEN
HDM/CD LETTERS OF AGREEMENT		
Decentralized health surveillance management project: analysis of institutional capacity for strategic management and integrated implementation of National Sanitary Surveillance System at level	FECAMP	
"Phase 2 in the national survey of seroprevalence of hepatitis A, B and C in capitals of Brazil"	Fundação Universidade de Pernambuco IAUPE ,	
Ensure viability of performance of research:	FUNDEP	

validation of rapid DiaMed-IT Leish immunochromatographic test in diagnosis of human visceral leishmaniasis		
Identification of *lambaris or matupiris* species of the *Astyanax* genus with larvivorous feeding habits belonging to the natural environments of the Amazon basin	CREATIO	
Implementation of a risk factor monitoring system for chronic diseases using telephone interviews in the State capitals and the Federal District	FUSP	
Study on congenital transmission of Chagas infection in Minas Gerais and preparation of a proposed care and control model	Fundação de Desenvolvimento da Pesquisa FUNDEP	
Vaccine coverage survey missed opportunities for vaccination study	Centro de Estudos Augusto Leopolodo Ayrosa Galvao- CEALAG	
Evaluation of the BC-Trap as new anopheline capture method	FUNDEP	
Risk factors for squamous intra-epithelial lesions in pregnant HIV+ women	CISAM-CEPAC	
Evaluation of species of *Oxydoras* genus (e.g., larvivorous fish) in control of immature forms of malaria vectors	AMTROPICA	

Table 11. Research projects conducted or financed by centers during 2006

RESEARCH PROJECT (PRINCIPAL INVESTIGATOR)	OTHER PARTICIPANTS
PANAFTOSA	
Project that evaluates health impact of the 1 million water tanks in uncultivated Brazilian regions (James Flint)	- CAN, BRA - PHAC, Fiocruz, MVV (implementation in semiarid regions)
Production of international standards for non-capsid protein (NCP) antibody tests for foot-and-mouth disease virus in sheep Support for development of a competitive ELISA for non-capsid proteins (NCP) antibody tests of foot-and-mouth disease virus at the Winnipeg laboratory	-National Center for Foreign Animal Diseases -Canadian Food Inspection Agency (NCFAD) Winnipeg, Manitoba, Canadá

RESEARCH PROJECT (PRINCIPAL INVESTIGATOR)	OTHER PARTICIPANTS
Comparison of kits using non-capsid proteins (NCP) for foot-and-mouth disease surveillance Use of NCP tests for health emergencies Use of receiver operating characteristic in test validation	-Istituto Zooprofilattico Sperimentale della Lombardia e dell´Emilia Romagna (IZSLER), Via Bianchi 7/9, 25124 Brescia, Italy -Central Institute for Animal Disease Control (CIDC-Lelystad), Houtribweg 39, Lelystad, The Netherlands -Institute for Animal Health (IAH), Ash Road, Pirbright, Surrey, GU24 0NF, UK -Danish Institute for Food and Veterinary Research, Department of Epidemiology and Risk Assessment, International EpiLab, Morkhoj Bygade, DK-2860 Morkhoj, Denmark -Kimron Veterinary Institute, POB 12, Beit Dagan 50250, 50 Maccabimst., Agriculture Centre, Israel -Federal Research Centre for Virus Diseases of Animals, Boddenblick 5a, 17493 Greifswald-Insel Riems, Federal -Republic of Germany -SAP Institute, PK 714, 06044 Ankara, Turkey -CODA-CERVA-VAR, Department of Virology, Epizootic Diseases Section, Groeselenberg 99, B-1180 Ukkel, -Belgium -Danish Institute for Food and Veterinary Research, Department of Virology, Lindholm, DK- 4771, Kalvehave, Denmark
Extension of validation of non-capsid protein (NCP) tests for foot-and-mouth disease surveillance in endemic areas of Cameroon (longitudinal studies) Use of TAGS to estimate non-capsid protein (NCP) test performance	-Department. Veterinary Clinical Sciences and Animal Husbandry, University of Liverpool, Leahurst, Neston, Wirral, CH64 7TE, UK. -Institute of Agricultural Research for Development, Regional Centre of Wakwa, B.P. 65, Ngaoundere, Cameroon. -Institute of Animal Health, Ash Road, Pirbright, Woking, Surrey, GU24 0NF, UK.
Validation of reference sera panels used in non-capsid protein (NCP) tests for foot-and-mouth disease surveillance	-Institute for Animal Health, Pirbright laboratory, Surrey, UK
Validation of non-capsid protein (NCP) tests for foot-and-mouth disease surveillance in sheep and pigs	-Servicio Nacional de Sanidad y Calidad Agroalimentaria, Ministerio de la Producción Secretaría de Agricultura, Pesca y Alimentación, Argentina -Instituto Colombiano Agropecuario, Ministerio de Agricultura y Desarrollo Rural, Colombia -Servicio Agrícola y Ganadero, Chile

RESEARCH PROJECT (PRINCIPAL INVESTIGATOR)	OTHER PARTICIPANTS
Characterization of bovine and ovine sera panels used in non-capsid protein (NCP) tests for foot-and-mouth disease surveillance	-Servicio Nacional de Sanidad y Calidad Agroalimentaria, Ministerio de la Producción Secretaría de Agricultura, Pesca y Alimentación, Argentina -Instituto Colombiano Agropecuario, Ministerio de Agricultura y Desarrollo Rural, Colombia -Servicio Nacional de Sanidad Agraria, Ministerio de Agricultura, Perú -Instituto Nacional de Investigaciones Agrícolas, Ministerio del Poder Popular para Ciencia y Tecnología, Venezuela
Validation of non-capsid protein (NCP) tests for foot-and-mouth disease surveillance in buffalo	-Laboratorio Nacional Agropecuário-LANAGRO-Pernambuco, Ministério da Agricultura, Pecuária e Abastecimento, Brasil -Instituto Colombiano Agropecuario, Ministerio de Agricultura y Desarrollo Rural, Colombia
Recombinant antigens used in immunoassays that evaluate viral foot-and-mouth disease activity	-Centro de Biología Molecular, Universidad de Giessen
Development of methodologies for detection of non-capsid proteins in viral suspensions used in foot-and-mouth disease vaccine	-Sindicato Nacional da Indústria de Produtos para Saúde Animal (SINDAN)/Comisión de Asuntos de Aftosa (CAS) -Bayer S.A, São Paulo, SP, Brasil; -Akzo Nobel Ltda – Intervet, Fortaleza CE, Brasil; -Vallée S.A, Montes Claros, MG, Brasil; -Merial Saúde Animal LTDA. Paulinia, SP, Brasil; -Schering-Plough, São Paulo, SP, Brasil; -Pfizer Ltda, São Paulo, SP, Brasil
Molecular virus epidemiology Molecular arbovirus virology	-Laboratorio de Enterovirus, Fundación Oswaldo Cruz - Centro Colaborador OPS/OMS
Detection and characterization of viruses that cause vesicular disease	-Instituto Colombiano Agropecuario, Ministerio de Agricultura y Desarrollo Rural, Colombia -Laboratorios Veterinarios del Instituto Nacional de Higiene y Medicina Tropical, Ecuador -Instituto Nacional de Investigaciones Agrícolas, Ministerio del Poder Popular para Ciencia y Tecnología, Venezuela CENIAP

RESEARCH PROJECT (PRINCIPAL INVESTIGATOR)	OTHER PARTICIPANTS
Harmonization of "vaccine matching" procedures in foot-and-mouth disease. Harmonization of diagnostic procedures	-Laboratorios de Referencia de OIE. Red. -Reference laboratory for the Sub-Saharan continent, Gaborone, Botswana -Institute for Animal Health, Pirbright laboratory, Surrey, UK -Federal Governmental Institute Center for Animal Health, Rusia
Identification of foot-and-mouth disease virus from antigen-antibody complexes	-Laboratório Nacional Agropecuário-LANAGRO-Pará, Ministério da Agricultura, Pecuária e Abastecimento, Brasil
Duration of immune response against foot-and-mouth disease induced by commercial vaccines	-Laboratório Nacional Agropecuário-LANAGRO-Pará, Ministério da Agricultura, Pecuária e Abastecimento, Brasil
Immune response in bovines that undergo different vaccination series	-Laboratório Nacional Agropecuário-LANAGRO-Pará, Ministério da Agricultura, Pecuária e Abastecimento, -Brasil
CEPIS	
Bibliographic research on health effects of consumption of garbage-fed pork (D. Daza)	- International Potato Center PER
Water safety plan for Spanish Town, Jamaica (Q. María Luisa Esparza)	ARG, BRA, COL, URU
Water safety plan for Spanish Town, Jamaica (Ing. Ricardo Torres)	JAM USA (EPA) y CDC
They do not appear in the list, but they are included in the form: research on health effect of consumption of garbage-fed pork and presence of toxic substances in samples of water for human consumption (AQUATOX project)	

In order to facilitate the view of research reported by the units and centers that responded to the survey, a summary table is shown. The tables include subject groups as well as subdivisions by types of research **(Tables 12a, 12b).**

Table12a. Subjects and types of research reported by areas and units

Research topic	Type of research			
	Basic research	**Applied research**	**Epidemiological research**	**Secondary research**
Communicable disease	4	14 (4 clinical)	10 (2 clinical)	3
Chronic non-communicable disease				
Maternal and child health				
Sexual and reproductive health				1

Gender and health				
Mental health				
Oral health				
Animal health				
Environment and sanitation				
Health economics		1		
Health human resources		2		
PHC				
Health systems				
Drugs				
Social determinants of the health-disease process				
Dissemination of knowledge				
Population groups			1	4
Total	4	17	11	8
Number of projects related to MDG: 13 **Projects that do not include research: 0**				

Table 12b: Subjects and types of research reported by centers

Research topics	Basic research	Applied research	Epidemiological research	Secondary research
Communicable disease				
Chronic non-communicable disease				
Maternal and child health				
Sexual and reproductive health				
Gender and health				
Mental health				
Oral health				
Animal health	1	16	2	
Environment and sanitation		2	1	1
Health economics				
Human resources for health				
PHC				
Health systems				
Drugs				
Social determinants of the health-disease process				
Dissemination of knowledge				
Technology				
Population groups				

Total	1	18	3	1
Number of projects related to MDG: 4 **Projects that do not include research: 0**				

Of all the research projects implemented or financed by PAHO/WHO and included in Tables 10 and 11, the date of approval by the PAHO Ethics Committee is only reported for three projects: human resources development, HIV/AIDS infection, and therapeutic efficacy of malaria drug surveillance projects. Other projects may have been approved by local Research Ethics Committees, but the survey did not request this information.

4. Discussion:

The general survey response rate should be considered low and the data provided is often inconsistent. Therefore, definitive conclusions can not be drawn from the results. However, there was a good response rate from headquarters, in the Units under the Office of Assistant Director. It is interesting to point out that, unlike the administrative areas, at this level responses were provided by the Unit Chiefs and not by the Area Managers they work under.

The low response rate from country offices can be attributed to different reasons that could be examined in the future. Given the quantity and quality of the information available in country offices, alternatives to electronic surveys in order to access this important resource are being considered, including interviews with country managers on their visits to PAHO/WHO headquarters, and mission trips by members of the RC.

The lack of response by the country offices in the English-speaking Caribbean countries is noteworthy, as this is a very important limitation for understanding the research work conducted by PAHO/WHO.

The absence of most priority countries is significant, since one of the challenges in developing a research policy for the Organization is being able to respond to their need for research as well as that of countries with a higher level of scientific and technological development.

The responses received show that PAHO conducts or finances research in all countries in the Region. They also indicate that there is a demand for technical cooperation in this area.

Even with the low response rate, the assumption about the wealth of information in the field of health research that can be obtained from the country offices has been confirmed.

Subjects or concerns related to access or use of knowledge have not been included in the responses. The questionnaire format may have led to think only about the knowledge production component, or this may be an element that is not present when considering this area.

Analysis of the data presented leads to consider several questions and challenges. The first is the lack of agreement between the information about research conducted in the countries supplied by areas, units, and centers and that of the country offices. There are research projects identified by the country offices that have not been identified by the corresponding units, and vice versa.

For projects identified by units and centers and not mentioned by country offices, the first explanation that comes to mind is that direct research agreements are implemented without direct participation or sense of "belonging" by the country offices, which is an important problem. It is more difficult to explain the opposite case (research identified by country offices but not by the areas or units responsible for the subjects) assuming that all responses are complete and include all the information available to the person that responded.

This lack of agreement highlights the importance for the Organization of having a research project inventory. It also provides a sign of the difficulties that will be encountered in implementation and maintenance as a tool for PAHO/WHO research policy. This inventory would ensure rapid and orderly availability of data.

A second challenge arises from evidence of demand for research cooperation, shown by inclusion of the subject in the National Cooperation Strategy documents (which often focus on support for epidemiological surveillance), without clear research policies and priorities that can respond to this demand at the level of the technical areas of the Organization. A demand that has not been included here, but which has been documented in ten countries and the Organization has responded to, is that of participation in EVIPNet as an instrument for evidence-based policy-making.

Tables 1, 10, and 11 show several different research topics. Although this diversity reflects the wide range of subjects covered by PAHO/WHO technical cooperation, it also shows a lack of significant focus in the context of the relatively limited resources dedicated to health research by the Organization.

As a result of this diversity, some of the research projects can always be related to part of one or more priorities in the countries where national research priorities have been defined. With the exception of Brazil, based on the responses received, it is not clear whether this has been intentional. The lack of response by most centers probably distorts this image, since each of them has a clear thematic focus. It also distorts the image of the subjects in which PAHO research activity is concentrated, and their relationship to the Millennium Development Goals.

It is interesting to point out the varied capacity to establish research partnerships depending on the subjects involved. Although there are very few "partners" in projects reported by the units and these are concentrated in a limited number of institutions, the centers and the Special Programme

for Research and Training in Tropical Diseases (TDR) appear to have a significant level of international integration. In attempting to understand this difference it should be taken into account that the primary mission of the centers and TDR is research, whereas this is not the case for PAHO as a whole. Moreover, responses have only been provided by two centers. In any case, it appears to be valid to ask whether or not PAHO research could be more integrated in the international academic environment, and whether the sources of research funds could be diversified.

These differences in the capacity to establish partnerships and obtain external financing lead us to question which are the areas where the Organization should concentrate its limited research resources. The response is not simple. It could be argued that priority should be granted to areas and subjects that have not been considered by other sources of financing when allocating funds. However, the concentration of most financing in cutting-edge subjects that can have the greatest impact and change the current frontiers of knowledge could also be supported from another perspective.

A minor observation regarding research funding refers to the apparently low visibility of the Inter-American Development Bank (IDB), Organization of American States (OAS), and World Bank in spite of their investment in research in the Region. This is particularly interesting in the case of the Inter-American Development Bank, because their financing is concentrated primarily in generating and strengthening national infrastructure for research management, an objective closely related to that of development of national health research systems that has been proposed by the Organization.

The low rate of positive responses on the ethical review conducted by PAHO on the research projects the Organization participates in and the discrepancies between reports made by the country offices and the PAHO Ethical Review Committee (PAHOERC) are a cause for concern. A significant effort has been made to change this in the past year.

Based on the above, a matrix of PAHO strengths and weaknesses with regard to its function of strengthening health research in the Region can be proposed:

Strengths:

- Direct presence in countries
- In-depth knowledge of health situation and health research by the country offices
- Specialized centers with significant research production and full integration in the international academic community
- Centers with high capacity for research fund-raising
- Inclusion of health research topics in the National Cooperation Strategy documents of a significant percentage of country offices
- Networks, agreements, and a favorable political level

Weaknesses:

- Limited relative importance of research in the work performed by the Organization
- Lack of research priorities in many areas and units, and at the level of PAHO as a whole
- Dispersion of research topics
- Weakness of mechanisms to ensure ethical review of research projects conducted or financed by the Organization
- According to reports by the representatives, lack of human and financial resources to respond to the demand for research cooperation
- Lack of knowledge of processes and methodologies

Other important points

Although it has not been presented on this occasion, the Research Promotion and Development Unit has worked to advance the knowledge of the functions performed by the different national institutional actors in providing a steering role for national health research systems. This is also point "a" in the knowledge gaps identified in the document presented at the 40th Meeting of the Advisory Committee on Health Research (ACHR).

The Canadian investigator, Dr. Vivian Robinson, was contacted to develop a research protocol with a preliminary version that was sent to ACHR members for observations. To date, response has been very limitedThe unit hopes to carry out this research as soon as possible.

Work is also being conducted actively with the Brazilian Ministry of Health, the Council on Health Research for Development (COHRED), the Global Forum on Health Research, the Mexican National Institute of Public Health and the NGO Nicasalud, in preparation of the high-level meeting on health research in Latin America and the Caribbean, to be held in April 2008 in Brazil. The Ministries of Health and Science and Technology Organizations of the countries in the Region, as well as other key actors in the subject, will participate in this meeting.

The advances made in the areas of systematization and use of knowledge, clinical trial registration, and strengthening ethical review capacity are described in other documents. Here we will only mention performance of a series of training events for PAHO/WHO staff members in 2007, on subjects such as : Systematic literature review, Use of evidence in development of health policies (for Managers); Research Ethics (for research focal points in the countries and technical personnel from the main office); Research project management (for personnel involved).

ANNEX 1

SURVEY FORM

The State of Research in PAHO Areas, Units, Centers and Country Representations

The Research Promotion and Development Unit (HSS/RC) is currently working on defining and making explicit our Organization's research policy. In order to do that, it needs to know what priorities have been identified by Member Countries and by its own professionals, as well as what research projects have been carried out or funded by PAHO in the year 2006.

Equally important is to know what the decision-making processes regarding research have been like, and the degree to which research is included when planning and budgeting activities, as indicators of the integration of research in the Organization's tasks.

That is why we request you to devote some minutes of your time to answering this questionnaire as completely as possible. Please, do not hesitate to add additional pages, or any comment that may seem pertinent to you.

We would appreciate if you could return the questionnaire before **July 6th, 2007** to the following electronic address: sanchezd@uru.op-oms.org

Questionnaire to be filled by heads of Areas, Units or Centers

1. Name of Area, Unit or Center:

2. Name of respondent:

3. Position:

4. Has your Area, Unit or Center directly provided or funded research training to country researchers or health workers during 2006? If your answer is yes, please indicate the main contents.

   YES
   NO

5. If research training activities for your personnel have been carried out during 2006, please describe the main contents.

6. Has your Area, Unit or Center carried out other types of activities aimed at strengthening research at the country level during 2006? If your answer is yes, please list them.

   YES
   NO

7. Has your Area, Unit or Center carried out or funded any research project during 2006?

   YES

NO

8. You shall see a table below. If you have carried out or funded research projects during 2006, please, fill the corresponding slots, copying it as many times as you may need.

Research projects (fill one per each project)

Project title:											
Type of research *	P. Investigator and institution	PAHO focal point	Duration in months. Date of 1st payment	Beginning date	PAHO budget contribution	Extra budgetary funds (indicate source)	Total budget	Countries involved	Organizations involved (indicate if collaborating centers)	Date PAHO ethical approval	PAHO counterparts

*Type of research (non exclusive options)

1. Psychological, epidemiologic and social
2. Health policy and systems
3. Products and interventions development (clinical research)
4. Experimental and laboratory (basic)
5. Secondary (systematic reviews, meta-analysis and clinical practice guidelines)

9. Have research questions been defined for your Area, Unit or Center during 2006? If your answer is yes, please indicate how this has been reflected in your budget.

YES
NO

10. Has there been a priority setting exercise regarding research resources for your Area, Unit or Center? If your answer is yes, please indicate how this is reflected in your budget.

YES
NO

11. Has there been an exercise on priority setting regarding research areas (or subjects) in your Area, Unit or Center? If your answer is yes, please indicate how this has been reflected in your budget. If your answer is no, please go to question N° 13.

    YES
    NO

12. Please, list the priority research areas (or subjects) for your Area, Unit or Center, mention how they are reflected in your annual programming and describe, in a brief paragraph. the priority setting mechanism used to determine them.

13. List the main facilitating and limiting factors you encounter to carry out/fund research that responds to your needs.

14. Are there processes used systematically to disseminate results of research carried out or funded by your Area, Unit or Center? If your response is positive, please describe them.

    YES
    NO

15. What is the number/proportion of research projects carried out or funded by your Area, Unit or Center during the past two years that resulted in a paper published in an indexed journal?

16. Are research projects systematically registered in any data base? If yes, please indicate which data base/s.

    YES
    NO

17. Is there any person specifically in charge of research in your Area, Unit or Center? If your answer is yes, please say who.

    YES
    NO

Questionnaire to be filled by Country Representations

1. Country:

2. Name of respondent:

3. Position:

4. Has your Representation carried out or funded research projects during 2006? If yes, please indicate if this was done at the request of the country or because of a PAHO initiative.

   YES
   NO

5. Has your Representation directly provided or funded research training during 2006? If yes, please indicate if it was done at the request of the country or because of a PAHO initiative.

   YES
   NO

6. You shall see a table below. If research projects have been carried out or funded in the country during 2006, please fill the corresponding slots, copying the table as many times as you may need.

Research projects (fill one per each project)

Project title:											
Type of research *	P. Investigator and institution	PAHO focal point	Duration in months. Date of 1st payment	Beginning date	PAHO budget contribution	Extra budgetary funds (indicate source)	Total budget	Countries involv-ed	Organizations involved (indicate if collaborating centers)	Date PAHO ethical approval	PAHO counterparts

*****Type of research (non exclusive options)

- Psychological, epidemiologic and social
- Health policy and systems
- Products and interventions development (clinical research)
- Experimental and laboratory (basic)
- Secondary (systematic reviews, meta-analysis and clinical practice guidelines)

7. If research training activities have been offered to your personnel during 2006, please list them.

8. What are the main national institutions accountable for health research planning and funding? Please, mention the corresponding regulations, if they exist.

9. What are the percentages of GDP and health expenditure that the country devotes to health research?

10. Is there funding specifically devoted to health research (distinct from funds allocated to research in general)? If your answer is yes, please specify.

YES
NO

11. What are the main sources of funding for health research in the country? In the case of external cooperation, please identify the main donors

12. Is there a list of health research priorities for the country?

YES
NO

In case the answer to question N°12 was yes, please indicate the name of documents where these priorities can be found and summarize the process that led to its development.

In case the answer to question N°12 was yes, are these priorities reflected in national health research funding?

And in human resources training?

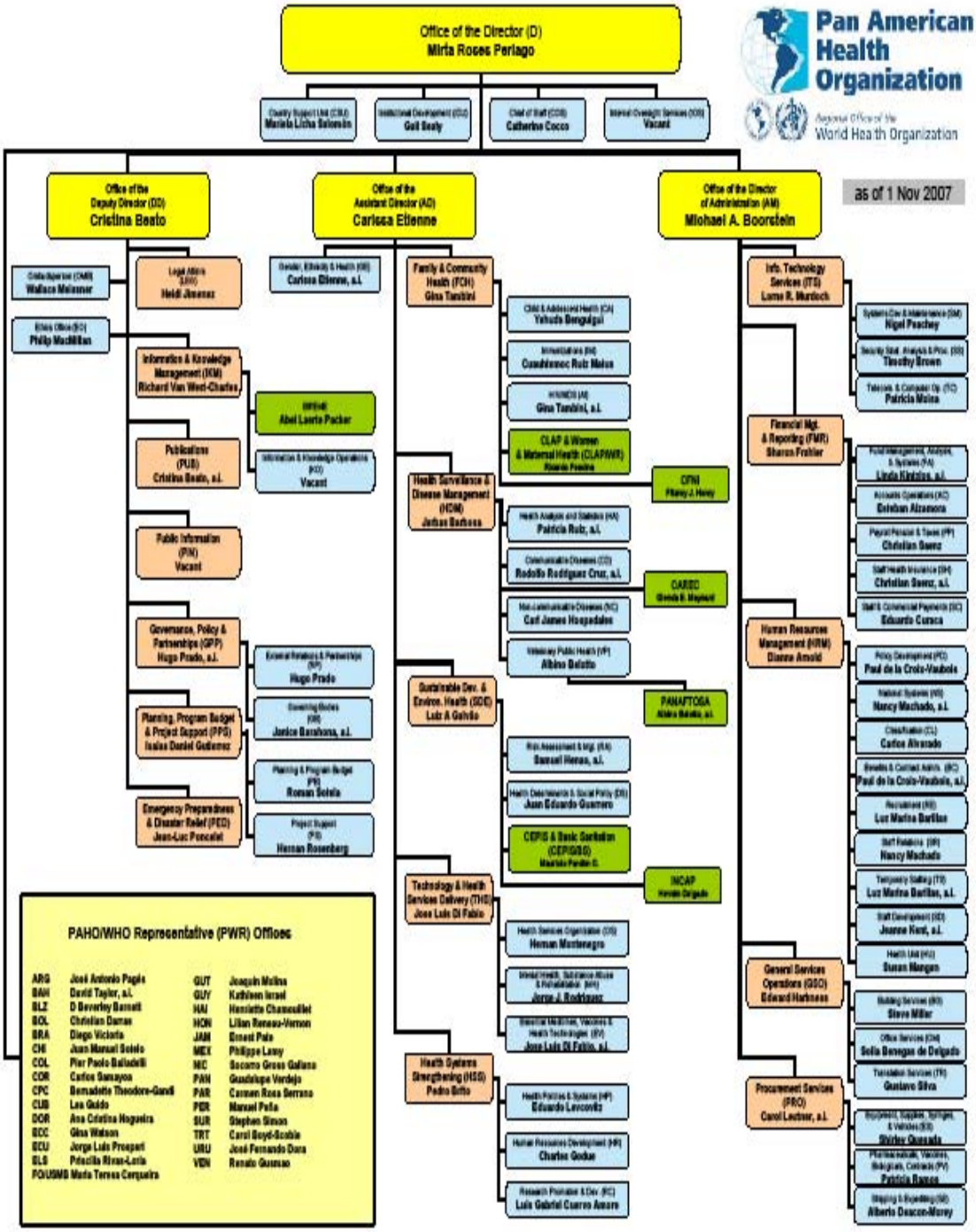
13. Has research been included as a priority for technical cooperation agreed between the country and PAHO?
    YES
    NO

14. Has your Representation received specific requests for cooperation related to health research?
    YES
    NO

15. If your answer to the previous question was yes, please describe these requests and whether the Representation had any difficulty responding to them.

ANNEX 2

PAHO/WHO ORGANIZATIONAL CHART


Pan American Health Organization
Regional Office of the World Health Organization
as of 1 Nov 2007
Office of the Director (D)
Mirta Roses Periago
Country Support Unit (CSU)
Mariela Licha Solomón
Institutional Development (ID)
Gail Sealy
Chief of Staff (COS)
Catherine Cocco
Internal Oversight Services (IOS)
Vacant
Office of the Deputy Director (DD)
Cristina Beato
Office of the Assistant Director (AD)
Carissa Etienne
Office of the Director of Administration (AM)
Michael A. Boorstein
Ethics Officer (EO)
Philip Machillan
Legal Affairs (LEG)
Heidi Jimenez
Information & Knowledge Management (IKM)
Richard Van West-Charles
Publications (PUB)
Cristina Beato, a.i.
Public Information (PIN)
Vacant
Governance, Policy & Partnerships (GPP)
Hugo Prado, a.i.
Planning, Program Budget & Project Support (PPS)
Isaias Daniel Gutierrez
Emergency Preparedness & Disaster Relief (PED)
Jean-Luc Poncelet
Gender, Ethnicity & Health (GE)
Carissa Etienne, a.i.
Family & Community Health (FCH)
Gina Tambini
Health Surveillance & Disease Management (HDM)
Jarbas Barbosa
Sustainable Dev. & Environ. Health (SDE)
Luiz A Galvão
Technology & Health Services Delivery (THS)
Jose Luis Di Fabio
Health Systems Strengthening (HSS)
Pedro Brito
Info. Technology Services (ITS)
Lorne R. Murdoch
Financial Mgt. & Reporting (FMR)
Sharon Frehler
Human Resources Management (HRM)
Dianne Arnold
General Services Operations (GSO)
Edward Harbness
Procurement Services (PRO)
Carol Lautner, a.i.
Abel Laerte Packer
Vacant
Janice Barahona, a.i.
Roman Salvia
Hernan Rosenberg
Yehuda Bengulgul
Gina Tambini, a.i.
CLAP & Women & Maternal Health (CLAPWH)
CFNI
Pilancy J. Henry
Patricia Ruiz, a.i.
Rodolfo Rodriguez Cruz, a.i.
CARICO
Albino Belotto
PANAFTOSA
Samuel Heras, a.i.
Juan Eduardo Guerrero
CEPIS & Basic Sanitation (CEPIS/BS)
INCAP
Hernan Delgado
Hernan Montenegro
Jorge J. Rodriguez
Jose Luis Di Fabio, a.i.
Eduardo Levcovitz
Charles Godue
Luis Gabriel Cuervo Amore
Nigel Peachey
Timothy Brown
Patricia Molina
Linda Kinstler, a.i.
Christian Suerz
Christian Suerz, a.i.
Eduardo Curaca
Paul de la Croix-Vaubois
Nancy Machado, a.i.
Carlos Alvarado
Paul de la Croix-Vaubois, a.i.
Luz Marina Durlan
Nancy Machado
Luz Marina Durlan, a.i.
Joanne Kent, a.i.
Susan Mangan
Steve Miller
Sofia Benegas de Delgado
Gustavo Silva
Shirley Quesada
Patricia Ramos
Alberto Deacon-Morey
PAHO/WHO Representative (PWR) Offices
ARG José Antonio Pagés
BAH David Taylor, a.i.
BLZ D Beverley Barnett
BOL Christian Darras
BRA Diego Victoria
CHI Juan Manuel Sotelo
COL Pier Paolo Balladelli
COR Carlos Samayoa
CPC Bernadette Theodore-Gandi
CUB Lea Guido
DOR Ana Cristina Nogueira
ECC Gina Watson
ECU Jorge Luis Prospert
ELS Priscilla Rivas-Loria
PO/USMB Maria Teresa Cerqueira
GUT Joaquin Molina
GUY Kathleen Israel
HAI Henriette Chancellier
HON Lilian Reneau-Vernon
JAM Ernest Pate
MEX Philippe Lamy
NIC Socorro Gross Galiano
PAN Guadalupe Verdejo
PAR Carmen Rosa Serrano
PER Manuel Peña
SUR Stephen Simon
TRT Carol Boyd-Scobie
URU José Fernando Dara
VEN Renato Guzman

ANNEX 3

IDB SCIENCE AND TECHNOLOGY PROJECTS 1976-2007

Science and Technology projects funded by the Inter American Development Bank. 1976 to 2007
Source: IDB. Information available on line
∗NRL: non refundable loan; TC: technical cooperation; L: loan) MIF: multilateral investment fund

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COUNTRY	NAME	APPROVAL DATE	Cost in U$S	Type∗
Chile	Interchange of Experiences Municipality Valparaíso y MOP with Río de Janeiro	MAY , 2007	8.000	n.a
Costa Rica	Analysis of Institutional, Legal, and Regulatory Framework	JAN 3, 2007	45.000	NRL
Regional Support	Agricultural Science and Technology Indicators for Latin America	DEC , 2006	99.920	NRL
Paraguay	Science and Technology Program	DEC , 2005	6:500.000	L (not spent)
Paraguay	PEF:PR0126 Science and Technology Program	NOV , 2005	750.000	L
Peru	Science and Technology Program	OCT , 2005	25:000.000	L
Regional Support	Operative Assistant RE1/FI1	AUG , 2005		TC
Costa Rica	Competitiveness Investment Program	JUN , 2005	116:835.000	L
Paraguay	Technical Studies Science and Technology Program	JAN , 2005	115.000	TC
Paraguay	Science & Technology Training	NOV , 2004	11.000	TC
Regional Support	External Final Evaluation of NFISP	DEC , 2003		TC
Costa Rica	Women in Science and Technology	JUN , 2003	70.000	TC
Regional Support	Regional Science and Technology Priorities in Region 2 Countries	FEB , 2003	150.000	TC
Dominican Republic	Support for the Higher Education Program, Science and Technology	NOV , 2002	31.000	TC
Guyana	Environmental Management Prog. II Phase	NOV , 2001	1:280.000	TC
Nicaragua	Support of Technology Innovation	JUN , 2001	6:790.000	L
Brazil	Small and Medium Companies in Northeast Br.	JAN , 2001	300:000.000	L
Uruguay	Technological Development II	DEC , 2000	50:000.000	L
Nicaragua	Support Science and Technology for SME	FEB , 2000	150.000	TC
Venezuela	Science and Technology Program II Stage	NOV , 1999	100:000.000	L
Guatemala	Technological Development Project	OCT , 1999	13:900.000	L
Argentina	Technological Modernization II	SEP , 1999	280.000.000	L
Colombia	Agricultural Tech & Sanitary Services	JAN , 1999	87.000.000	L
Brazil	Technological Incubators St. Catarina	JUN , 1998	3.500.000	MIF
Colombia	Science and Technology Program - III	AUG , 1995	100.000.000	L
Ecuador	Science and Technology Program	AUG , 1995	24:000.000	L
Mexico	Science and Technology Program	DEC , 1993	176:894.792	L
Ecuador	PPF:EC0170 Science and Technology Program	JAN , 1993	1:000.000	L
Mexico	Science and Technology Program	AUG , 1992	30.000	TC
Ecuador	Science and Technology Program	MAY , 1992	30.000	TC
Chile	Science and Technology Program	JAN , 1992	94:000.000	L
Uruguay	Science and Technology Program (basic research)	NOV , 1991	50:000.000	L
Venezuela	Science and Technology Program	DEC , 1990	47:000.000	L
Uruguay	Ppf: Science and Technology Program	FEB , 1990	150.000	TC
Mexico	Science and Technology II Stage	NOV , 1979	40:000.000	L
Argentina	Global Science and Technology Program	FEB , 1979	66:000.000	L

Brazil	Science and Technology Education Program	DEC , 1976	60:000.000	L

ANNEX 4

HEALTH PROJECTS FUNDED BY THE WORLD BANK 1998 TO 2007

Country	Project name
FED. REP. OF BRAZIL	Health Sector Reform Project - REFORSUS
REPUBLIC OF NICARAGUA	Health Services Extension and Modernization (2nd APL)
GOVERNMENT OF GUATEMALA	GUATEMALA Maternal and Infant Health and Nutrition
GOVERNMENT OF BOLIVIA	Health Sector Reform Project - Second Phase
ST. KITTS & NIVES	KN: HIV/AIDS PREVENTION AND CONTROL PROJECT
FEDERATIVE REPUBLIC OF BRAZIL	FAMILY HEALTH EXTENSION PROGRAM
GOVERNMENT	Health Sector Reform Project
GUYANA	HIV/AIDS PREVENTION & CONTROL PROJECT
REPUBLIC OF NICARAGUA	Health Sector Modernization Credit
REPUBLIC OF ARGENTINA	AR-Pub. Hlth. Surveillance & Disease Control Project (VIGIA)
GOVERNMENT OF JAMAICA	Jamaica Second HIV/AIDS Project
GOVERNMENT OF BOLIVIA	Integrated Health Development Project
GOVERNMENT OF BRAZIL	Disease Surveillance and Control Project (VIGISUS)
GOVERNMENT OF ECUADOR	HEALTH SERVICES MODERNIZATION PROJECT (MODERSA)
BANOBRAS	Health System Reform Technical Assistance Project
GOVERNMENT	Health Sector Reform Project
BANOBRAS	Health System Reform Sector Adjustment Loan
SUBNATIONAL,BOGOTA	Disaster Vulnerability Reduction Project - APL2
	Provincial Health Services Project
GOVERNMENT OF BRAZIL	BR: AIDS & STD Control II

MIN OF HEALTH	Endemic Disease Control Project
REPUBLIC OF ARGENTINA	Provincial Health Sector Development Project
NAFIN	Essential Social Services Program Project
GOVT OF BOLIVIA	Social Investment Fund Project (02)
REPUBLIC OF COLOMBIA	Social Sector Adjustment Loan Project
FEDERATIVE REPUBLIC OF BRAZIL	Second Family Health Extension Adaptable Lending
GOVERNMENT OF COSTA RICA	Health Sector Strengthening and Modernization II Project
REPUBLIC OF ARGENTINA	AR- Essential Public Health Functions
THE STATE OF MINAS GERAIS	State Reform Project - Minas Gerais
GOVERNMENT	Social Sectors Development Project
GOVT OF CHILE	Technical Assistance and Hospital Rehabilitation Project
	Social Investment Fund Project - SIF
GOVERNMENT OF BARBADOS	CARIBBEAN HIV/AIDS I-BARBADOS
THE GOVERNMENT OF URUGUAY	Uruguay Public Services and Social Sectors SSAL
ARGENTINE REPUBLIC	AR-Maternal and Child Health and Nutrition 2 (PROMIN)
FEDERATIVE REPUBLIC OF BRAZIL	Northeast Basic Health Services Project (02)
REPUBLIC OF VENEZUELA	Health Services Reform Project
FEDERATIVE REPUBLIC OF BRAZIL	Amazon Basin Malaria Control Project
GOVERNMENT ???	AIDS and STD Control Project
	Population & Health Project (01)
REPUBLIC OF ARGENTINA	Provincial Maternal-Child Hlth Sector Adjustment Ln. (PMCHSAL)
GOVERNMENT OF COLOMBIA	CO- 2nd Prog. Labor & Social Sector Ref

JAMAICA	HIV/AIDS PREVENTION AND CONTROL PROJECT (SECOND PHASE OF THE MULTI-COUNTRY HIV/AIDS PREVENTION & CONTROL APL FOR THE CARIBBEAN)

FEDERATIVE REPUBLIC OF BRAZIL	VIGISUS APL 2 - Disease Surveillance & Control

ARGENTINE REPUBLIC	Santa Fe Provincial Reform Adjustment Loan
GOVERNMENT OF PERU	Results and Accountability (REACT) DPL
GOVERNMENT OF PERU	HEALTH REFORM PROGRAM (First Phase: Mother and Child Insurance and Decentralization of Health Services)
NAFIN	Basic Health Care Project (02)
GOVERNMENT OF VENEZUELA	Social Development Project
REPUBLIC OF EL SALVADOR	SV - EARTHQUAKE EMERGENCY REC. & HEALTH SERVICES EXTENSION PROJECT
CARIBBEAN REGION	DO-HIV/AIDS Prevention & Control Proj.
	Caracas Metropolitan Health Services Project
MINISTRY OF HEALTH	UY Non Communicable Diseases Prevention Project
GOVERNMENT ???	Health Sector Reform Pilot Project
GOVERNMENT OF HAITI	Health Project (01)
FEDERATIVE REPUBLIC OF BRAZIL	HD PRGM. SECTOR REFORM LOAN
GOVERNMENT OF BRAZIL	AIDS and STD Control Project (03)
GOVERNMENT OF EL SALVADOR	Social Protection project
GOVERNMENT OF PARAGUAY	Paraguay Mother & Child Basic Health Insurance
GOVERNMENT	Provincial Reform Project (02) - San Juan
CENTRAL AMERICAN INTEGRATION SYSTEM	Central America HIV/AIDS Project

THE REPUBLIC OF BOLIVIA	Health Sector Reform Project
REPUBLIC OF ARGENTINA	AR Aids and Sexually Transmitted Diseases Control Project
REPUBLIC OF HONDURAS	Health System Reform Project
GOVERNMENT OF ECUADOR	SECOND SOCIAL DEVELOPMENT PROJECT - HEALTH & NUTRITION - SUPPLEMENTAL LOAN
GOVERNMENT OF PERU	PE- (APL2) Health Reform Program
FEDERATIVE REPUBIC OF BRAZIL	Northeast Endemic Disease Control Project
GOV OF COLOMBIA	Second Programmatic Development Policy Loan for Sustainable Development
GOVERNMENT OF MEXICO	MX Technical Assistance for Public Sector Social Security Reform (ISSSTE)
GOVT OF ARGENTINA INA	Maternal and Child Health and Nutrition Project
GRENADA	Grenada: HIV/AIDS Prevention and Control
GOVERNMENT OF HONDURAS	HN/NUTRI/HEALTH (SUPL)
GOVT OF EL SALVADOR	Social Sector Rehabilitation Project
NAFIN	Basic Health Care Project (03)
GOV'T OF PARAGUAY	PY-Maternal Health and Child Development Project
DOMINICAN REPUBLIC	DO: Health Reform Support (APL)
GOVT OF ECUADOR R	SOCIAL DEVELOPMENT II: HEALTH AND NUTRITION (FASBASE)
TRINIDAD AND TOBAGO	T&T: HIV/AIDS Prevention and Control Project
GOVERNMENT OF GUYANA	Simap - Health, Nutrition and Water and Sanitation Project
REPUBLIC OF BOLIVIA	BO-Social Sector Programmatic Credit

GOVERNMENT OF BOLIVIA	Health Sector Reform - Third Phase Adaptable Lending Program
FEDERATIVE REPUBLIC OF BRAZIL	Northeast Basic Health Services Project
NAFIN	Basic Health Care Project
GOVERNMENT ???	Basic Health & Nutrition Project
GOV OF COLOMBIA IA	Municipal Health Services Project