

1. SUBJECT CLASSIFICATION	A. PRIMARY	PUBLIC HEALTH
	B. SECONDARY	INTEGRATED DELIVERY SYSTEMS

2. TITLE AND SUBTITLE
Ecuador: DEIDS reconnaissance, Oct.24-Nov.2,1972

3. AUTHOR(S)
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4. DOCUMENT DATE	5. NUMBER OF PAGES	6. ARC NUMBER
1972	4p.	ARC

7. REFERENCE ORGANIZATION NAME AND ADDRESS
American Public Health Association, Division of International Programs,
1015 Eighteenth Street, N.W., Washington, D.C. 20036

8. SUPPLEMENTARY NOTES (Sponsoring Organization, Publishers, Availability)

9. ABSTRACT

The American Public Health Association, under a contract with the Agency for International Development, has designed a program in public health improvement which is called the Development and Evaluation of Integrated Delivery Systems (DEIDS). The activity is designed to assist countries to demonstrate how to establish health delivery systems within seven years. Such projects include, but are not limited to, Maternal and Child Health and Family Planning and Nutrition. The projects are to cover large populations in predominantly rural areas. They are to utilize in-country resources for the service component, although external assistance organized by DEIDS is available for planning, evaluation, training, and limited amounts of essential equipment. It is expected that successful health delivery systems can be subsequently replicated in the country or in the region.

These are phases through which DEIDS projects proceed:

- a) Phase I -- reconnaissance within a specific country or region, to gather information about disease patterns, health services as currently organized, local resources, cultural aspects, community involvement, the potential for integration of various parts of public health, opportunities for innovation, current and potential staffing, training, supervision, emphasis upon preventive services, outreach, cost, and evaluation
- b) Phase II -- Detailed planning. This phase begins if the survey in Phase I recommends it, and involves experts from the host country as well as experts assigned by DEIDS.
- c) Phase III -- Pilot Project Operations, which continue for as long as eight years.

10. CONTROL NUMBER	11. PRICE OF DOCUMENT
PN-AAB-570	

12. DESCRIPTORS	13. PROJECT NUMBER
	14. CONTRACT NUMBER CSD-3423 GTS
	15. TYPE OF DOCUMENT

ECUADOR

DEIDS Reconnaissance

Oct. 24 - Nov. 2, 1972

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Carried out under Contract No. AID/csd 3423

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II. General

A. Geography

Ecuador, situated on the Pacific coast of South America straddling the Equator, is bounded by Colombia on the north and Peru on the east and south. It is the second smallest republic in South America, with an area of 104,506 square miles.

A dominant feature is the lofty Andean range, traversing the country from north to south, with many snow-covered peaks, including some active volcanoes. Four topographic regions are usually defined:

1. The Costa (coastal plain), slightly more than one quarter the total area of the country, stretches from the Pacific Ocean to the Andes. This is a rich agricultural belt where most of the country's tropical export crops are grown.

2. The Sierra (highlands), an inhabited plateau 8,000-10,000 feet above sea level, and approximately 400 miles long by 5 to 8 miles wide, lies between two Andean chains, the Western and Eastern Cordilleras. The Sierra experiences frequent earthquakes.

3. The Oriente (eastern jungle), comprising about half of the country, slopes gently east of the Andes. It has dense forests, and flat valleys along tributaries of the upper Amazon.

4. The Archipelago de Colon (Galapagos Islands), situated in the Pacific Ocean 600 miles off coast, have an area of about 3,000 square miles.

Ecuador experiences a wide range of climate because of extremely varying altitudes. It is hot and humid in the lowlands, springlike in the Sierra plateau year-round, but with diurnal temperatures varying as much as 40 F.

There is a wide range of animal life in Ecuador, including the almost prehistoric giant tortoises in the Galapagos. The jungles of the northern coast and of the Oriente are especially rich in wildlife. In the Sierra, where many centuries of intensive agriculture have reduced the animal life, domesticated animals are prevalent. The oceans abound with a large variety of fish, valuable in commerce.

Minerals are scarce, although the location of Ecuador between Peru and Colombia, both mineral rich, suggests the probability of extensive deposits. It is hoped further exploration will uncover coal, iron, copper, manganese, magnesium, silver, and platinum. Petroleum has already been discovered and exploitation of it has begun.

Ecuador has a predominantly agrarian economy, potentially limitless in diversification, with marked regional variation. The Sierra produces grains, root crops and livestock for internal consumption; the coast specializes in tropical

produce for export -- cacao, coffee, bananas.

Fifty percent of the inhabitants are concentrated on the relatively small amount of habitable land in the Sierra; most of the other 50 percent live on the Costa. The Oriente and the Galapagos are only sparsely populated.

Until recently communications between regions were only poorly developed. Railroads connect Quito and Guayaquil to San Lorenzo on the northern coast. Highways run from the Sierra to many points on the Coast, and to a few points in the Oriente. Many of the larger settlements, dispersed through the sparsely populated Oriente, are accessible only by pack trails, or in some cases, by light aircraft.

B. Administration and Politics

For administrative purposes the country is divided into 19 provinces, each subdivided into a number of cantons, in turn divided into parishes. The Galapagos Islands are administered as a separate entity under the Minister of Defense. In many cases the provincial boundaries do not correspond with the chief geographical features. Each Province is headed by an appointed Governor and an elected Prefect.

The country has undergone frequent periods of chaos when little effective government has existed on the national level. A constitutional convention was called 16 times between 1812 and 1946 in the hope that those who participated in drawing

up the constitution would attempt to see that a functioning government was established under its provisions. The semi-autonomous status of the municipalities has made possible the functioning, in varying degrees of effectiveness, of these local governments. The constitutional history has been dominated by the issue of the relationship between civil and church authority. This question has been the principal basis for the enduring dispute between the Conservative and Liberal factions, -- one representing primarily the interests of the Sierra (Conservative) and the other representing those of the Coast (Liberal). The issue has been rooted also in rivalry between the two major cities, Quito, the capital, and Guayaquil, the chief port and center of commerce.

Since July, 1963 the country has been ruled by a four-man board of the military government (Junta Militar). Before assuming power through a coup d'etat these men were the chiefs of the navy, army, air force, and War College (Academia de Guerra). Although the military government decreed that the general provisions of the Constitution of 1946 would continue in effect, it took over the executive and legislative responsibilities. No effective checks on its power exist, but its rule has been relatively mild.

The ideal chief executive in the popular view has been a strong-man president who could dominate the Congress

and had sufficient power to get things done. Total arbitrariness without regard to public opinion has never been tolerated. Actually, military dictatorship has not been prominent in the country's history. As a rule, the armed forces have assumed power and maintained order only until a constitutional government could be established.

Immediately under the president is the Cabinet, composed of the Ministers of Government, Foreign Relations, Education, Public Works, Industry and Commerce, Defense, Public Health, Social Welfare, Finance, and Agriculture and Livestock. All decrees, decisions, and resolutions of the president must be countersigned by the appropriate minister. Congress has the right to censure them for personal or official misconduct. There are usually an equal number of Coastal and Sierra ministers, and certain posts, by tradition, go to specific parties, i.e., the Social Welfare post usually goes to the Socialists.

Provincial governors are freely appointed and removed at the president's discretion and usually change with each change of administration.

The governors of provinces, in turn, appoint or remove the political chiefs of the cantons. The cantons are subdivided into parishes, which in the countryside are theoretically under the authority of a political lieutenant.

His prestige and sphere of influence among the rural population, and especially among young Indians, rarely equals that of the parish priest.

In the urban areas, especially the provincial capitals, there exists a relatively strong institution of local government called the municipality. It is run by a city council, freely elected by popular vote of all the urban citizens, and is relatively free to handle all purely local matters without outside interference.

There are no city limits. Towns are not thought of as having a separate existence from the area surrounding them. Practically by definition every town is the administrative center of a parish, canton, or province. Only provincial capitals have mayors, funds, and public services. Any population center that is not an administrative unit of the central government is either a landed estate or a village.

Quito remains the cultural and ecclesiastical center and has retained the balance of political power. Weighed against this is the growing economic power of Guayaquil. The cleavage between Coast and Sierra arises not only from the competition between the two centers of power, but also from differences in traditions and outlook. Landowners and merchants are also separated from the impoverished and passive masses by a rigid class structure and class consciousness.

Parties other than the Conservatives and the Liberals have sprung up in recent years but have been small, ephemeral, or far to the right or left. The Ecuadorian Socialist Party, while durable, has never been large enough to make a significant impact. Some of the newer parties are largely personalist movements, with little life and identity independent of their leaders.

Political attachments are usually based far less on ideological commitment than on family connections, personal trust and loyalty, congruence of economic interest and regionalist sentiment. Thus the parties have come to have a decreasing relevance to political life, particularly as the base of suffrage has expanded to include the burgeoning lower class.

The Church in the Sierra holds a preeminent position in social and economic life, as well as exhibiting political strength in that the parish priest is often seen as the ultimate temporal as well as spiritual authority in the remote villages and small towns of the Sierra. This contrasts with the Coast, where the Church's influence is weak. The Coast is the base of the Liberal Party, whose major platform has historically been anti-clericalism and which has been more closely allied with the armed forces (in contrast to most of the L.A. countries). The Church-State conflict ceased to be a major political issue on the national level about 1945, although feeling remains strong in some areas of the Sierra.

The labor force is one of the least organized and least unified on the continent. From a political point of view the Communist dominated Confederation of Ecuadorian Workers is the most important labor organization, and the most politically active (CTE).

The Federation of University Students of Ecuador (FEUE) is an important political pressure group. More literate than the bulk of the population and more concerned with improvements in the society, it sees little hope of change through normal constitutional means.

C. Demographic and Statistical Data

In 1971, the population of Ecuador was estimated as 6,500,000, with an average of 57 persons per square mile. On the Coast this varies from 120 to 20 per square mile. Between one-third and one-half of the population is Indian; 10% white; 10% Negro or mulatto; the remainder mestizo (mixed). The Indians live primarily in the Sierra; whites in the provincial capitals; almost all the Negroes and mulattoes on the Coast.

Most of the Sierra is mountainous and unsuitable for agriculture; the number of persons in relation to productive land is extremely high. To relieve pressures on the land because of uneven distribution of population, projects have been undertaken to build access roads and to open new lands to colo-

colonization, directed principally toward the forested lands west of the Andes, but including Oriente as well.

Approximately 62% of the population is under 25 years of age with almost equal numbers of males and females. Over 48% are under 15 years. The birth rate in 1972 was 45 per 1,000, with an annual population growth rate of 3.4 percent.

D. Economics

Ecuador is one of the lesser economically and socially developed countries of Latin America. As a consequence, the basic fact of economic and social life for more than one-half the 6.5 million Ecuadoreans is scarcity of economic goods and services as well as of the benefits which would accrue to them if they participated more and had greater control over the social and political system in which they exist. It is estimated that these marginal inhabitants earn less than the equivalent of \$80 per year per person. During their relatively short lives, they are inadequately fed, clothed, housed, educated and employed. Their consequent lack of skills, motivation, health and energy reduces greatly their contributions to their society. This in turn exacerbates their situation further since the country's economic and social system greatly needs their inputs if their economic and social condition and that of the system in which they live are not to continue to deteriorate.

The Gross National Product per capita in 1970 was \$240 and the percapita income was \$278, exceeding only Bolivia and Haiti in all Latin America. Agriculture is the basis of the economy, accounting for about 40 percent of the GNP. The government of Ecuador is attempting, through loans, grants, and technical assistance from a number of countries, to improve its livestock, forests, fisheries, transportation, mining and industrial development.

Oil discovery and exploitation has been giving revenues that have had a positive impact on Ecuador's financial and development situation, but this industry is at a very early stage of development, with exploratory efforts far from complete and the magnitude of reserves still unknown. Several foreign oil companies are already closing down their operations. It is therefore impossible at this point to predict Ecuador's long-range potential as a petroleum producer. Even if the production rate is accelerated during the next few years, the per capita income would only change modestly at best, especially given Ecuador's present rate of population growth.

About 33 percent of the population is gainfully employed, while 53% of the population is over 12 years of age. Of this number 35 percent are urban and 65 percent are rural. Of those employed, 18% are women, primarily in services, including

public administration, where they equal the number of men. Ten percent of agricultural workers are women. The number of men and women employed in small handicraft industries is about equal and about 23% of the persons engaged in commerce are women.

E. Educational Level and Distribution

The illiteracy rate in Ecuador is about 68%. To help improve this situation, the government organized a national literacy training program in 1967. At present, radio is the most effective channel of information. Although the press is a responsible one (4 leading daily newspapers) the impact it can make on the country as a whole has been limited by illiteracy and by poorly developed transport and communications systems.

Education is theoretically compulsory between the ages of 6 and 12 years, but attendance is affected by available places and a high dropout rate. Public schools are free; private religious schools play an important part in providing places. There are seven universities.

The official language of Ecuador is Spanish. Many people are bilingual, speaking Quechua as well. A significant minority speaks Quechua either exclusively or at least with greater frequency and fluency than Spanish. English is now more popular than French and German.

The key element to the quality of the output of the Ecuadorean educational system is the primary school system. As long as it reaches only 57% of all children, and gives them less than acceptable levels of education, the secondary, technical, normal, and college level schools can make small headway toward preparing the citizenry for the task of development.

F. Religions, Cultures, and Ethnic Groups, Including Health Beliefs and Systems

The people derive largely from two basic physical stocks: South American Indian and white (chiefly from Spain). A third physical element, the African Negro, was introduced by the Spaniards shortly after their conquest of the New World, and this group has mixed with both whites and Indians. Estimates of ethnic composition are that 40% of the population is Indian; 40% mestizo; 10% Negro and mulatto, and 10% white. Relatively recent assimilation of persons of European and Middle and Far Eastern extraction has added new ingredients to the already heterogeneity of the population.

Within the group socially defined as "white" there is a wide range of racial background, from pure European extraction to largely Indian or, very rarely, Negro background. However, from the point of view of culture, persons socially classified as "white" do constitute a single group, which shares in general a similar

hispanic cultural tradition and a common participation in the national society.

The government has grouped the Indians together for the purpose of legislation and government aid. However, as many as 698 separate Indian groups can be identified, many markedly different from one another. Loyalty and identity are focused on tribal, communal or regional groups. The failure to account for these differences has thwarted attempts to implement social and economic reforms. The Indians are considered more as a depressed social segment than as many groups of people with divergent languages and ways of life. The most pronounced division of Indian cultures is that which exists between Sierra inhabitants and those of the lowlands, both on the Coast and in the Oriente.

G. Policies and Laws

The President of Ecuador in 1968 called on the country to support the Pope's Encyclical "Humanae Vitae" and declared himself to be against population control programs. However, responsible government officials have not only disregarded this plea, but have actually supported family planning. The Minister of Health at that time had been the scientific director of the Ecuadorean affiliate of International Planned Parenthood (APBFE).

He was responsible for planning, and setting into action, one of the most inclusive family planning programs in Latin America. Soon after the Department of Rural Medicine and Population was set up within the Ministry of Health (1969), it was restructured to include a separate Department of Population and the Ministry slowly began to introduce family planning services into its facilities throughout the country. With the change in government in 1971, this Department has been restructured and given more vigor. Ecuador is the only country among the developing nations that has entered into a bilateral agreement between AID and its Ministry of Defense to initiate an official family planning program.

The Catholic Church has not taken a stand on the question; the Archbishop of Guayaquil and other clerics actually have associated themselves positively with family planning activities. Some clerics have been sent to the United States under AID funding for family planning education.

Family planning training for teams working in government clinics had been going on over a long period of time and the Ministry of Health now runs its own training programs.

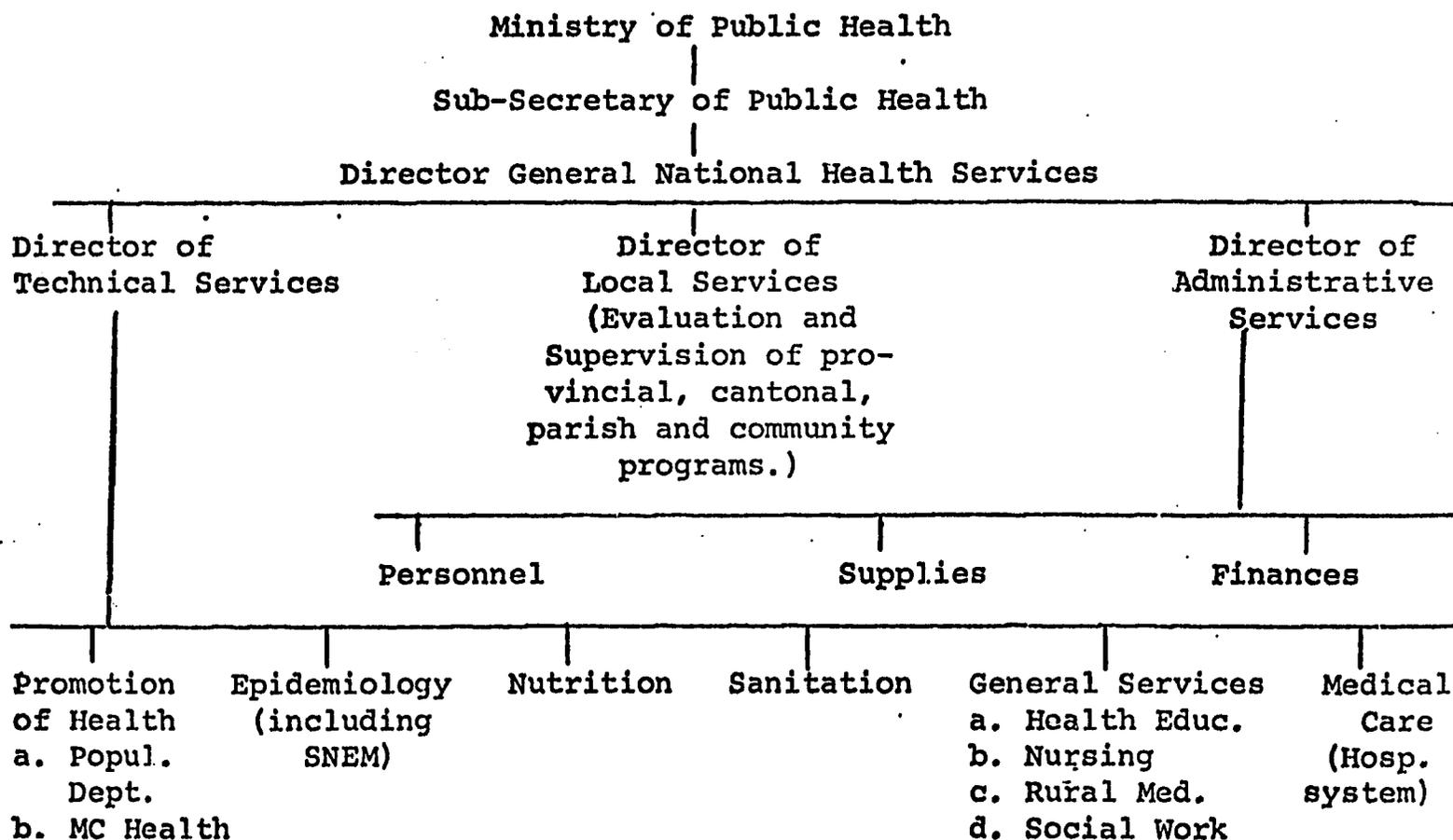
III. Health Administration Responsibilities and Activities

A. Official

1. The Ministry of Public Health (MSP) was disassociated from the Ministry of Social Welfare in 1967. Since that time it has been directed by seven different Ministers. The seventh and current Minister came into office with the present regime in February to face the same problems of limited funds and duplication of services, personnel and facilities confronted by his predecessors. In April of this year the Minister restructured the MSP to enable it to undertake the task of integrating governmental and autonomous resources, and the results of this effort, as well as the new emphases on regional planning (to avoid traditional inter-provincial jealousies) and environmental health, are said to be clearly stated in the forthcoming Five Year Plan. Assisting the Minister in formulating these long-range plans is a formal intraministerial Technical Committee, composed of the General Director of Health, the National Program Directors and the Program Division Chiefs.

The functional chain of command at the national level goes from the Minister through the Sub-Secretary of Health (Vice-Minister) to the Director General of Public Health who has immediate responsibility for all MSP programs. There are three program areas: The National Directorate of Technical Services, with subsidiary Divisions of Health, Promotion (including MCH and a

special Department of Population), Epidemiology, Nutrition, Environmental Sanitation, General Services (Nursing, Social Work, Rural Medicine, Health Education), and Medical care (hospital systems); the National Directorate of Administrative Services includes the Divisions of Finance, Personnel and Supplies; and the National Directorate of Local Services has the function of supervising and evaluating programs at the Regional, Provincial, Cantonal, Parish and Community levels. This structure is shown graphically in the following simplified chart.



On a country-wide basis there are four administrative regions (Central, Southern, Coastal and Manabi) encompassing a total of nineteen provinces. Regions and provinces have similar structures to those of the national level, and although there is discernible thinning out of personnel as the level decreases, functional responsibilities are duplicated as well. The Director of SNEM is responsible to the Southern Regional Director.

The regional directors have supervisory responsibilities for unequal numbers of provinces and cantons and vary in the accessibility of the facilities and communities, as well as in the concentration of populations, ethnic groups, etc. The lack of travel funds and transportation facilities have precluded adequate supervision.

The provincial chiefs have under them a chief of medical care, an epidemiologist and the directors of health centers. Health centers offer the following services: 1) maternal and child health activities (including Family Planning), 2) dental care to pregnant women and pre-school children, 3) immunizations, and 4) environmental sanitation. The chief of medical care is in charge of the provincial hospital which provides: 1) adult medical care, 2) obstetrics, 3) pediatrics and 4) general surgery.

Further operational levels supervised by provincial directorates are the cantonal hospitals of which there are 32 (24 of which are nearing completion), parish sub-centers, health posts and dispensaries.

For example, in the Province of Bolivar (population 190,000), the provincial health officer has under him facilities in 4 cantons and 21 parishes. These include only 1 health center, 5 sub-centers and 5 dispensaries. The Canton of Guaranda, the principal town, encompasses 99,000 people of which the health center serves 12,000. The health center staff consists of 2 doctors, 1 dentist, 1 trained midwife, 1 nurse, 5 nurse auxiliaries, 1 dental auxiliary, 1 social worker, 1 sanitary inspector, 1 secretary and 1 diener. It appears that all personnel work only part-time. They operate under a very well developed outline of activities, setting the norms and standards for each of the major activities. The provincial health officer, who has an M.P.H. from Chile, appeared to be knowledgeable and efficient. The staff of the health center also seemed to be well organized and within the limits of time, seemed to be involved in the promotion of community activities and attitudes leading to better utilization of services. The health center receives a small part of its financing from the consultant fees paid by patients (20 cents for adults and 12 cents for children). Usually a subcenter is staffed by a young physician, who is complying with

the requirement of one year of "rural medicine," and one auxiliary, trained or untrained. It serves approximately 1,500 people in the immediate location and 5,000-6,000 people in the surrounding area.

We also visited one dispensary during our visit in a town with a population of about 2,000. The one physician who was supposed to work there had been away some months due to illness and a replacement had not yet come. The "dispensary" refers to the terminology used during the period that medical care had been under the Ministry of Social Welfare. It is planned that all dispensaries will be converted into sub-centers or health posts under the new plan.

2. Social Security (IESS)

While the MSP has fully integrated the medical care facilities, formerly under the Ministry of Social Welfare, with its preventive services, some of its services overlap and compete with the vastly more wealthy Social Security system. The latter operates four large hospitals of 1,200 beds (with the possibility of expansion by 450 more), 8 small hospitals and 35 dispensaries for its 330,000 insured members. The system's chief drawback has been that it provides no coverage for dependents. The new policy of the IESS is that the "social security should be progressively extended to cover all the working population in both the urban and rural areas should give services to the entire family rather than to only the

insured worker." It is planned that within the next seven years, care will extend to all mothers and to children up to the age of eighteen. It is also planned that the IESS will cooperate with the MSP by paying for the use of Ministry facilities in areas where IESS has none. IESS is also contemplating payment to the MSP for preventive services, such as immunizations, malaria protection, and flouridation of water which is not now provided to insured persons.

While the Minister of Public Health has mentioned his interest in integrating IESS into a total National Health Service, his advisors in this regard mentioned its impracticality at this time. Coordination and cooperation are considered the most practical measures.

3. Another major health delivery system is that of the Armed Forces (MD). It does not actually duplicate MSP programs, inasmuch as its only clientele are the active and inactive military members of the armed services and their families. There are now approximately 12,000 men in active service and for each such person there are 4 to 5 inactive persons with families. Nonetheless, the program does represent a "competing" service, in that priorities are established independently and funds and facilities are administered autonomously, thus causing a dispersion of scarce national budgetary resources. The Minister of Public Health would like to integrate the military system into

the MSP, but acknowledges that under the present circumstances increased coordination is a more practical goal. Results of this effort can already be seen, particularly in the field of family planning, where the military's nine centers and nineteen sub-centers for family planning are providing services to the civilian population. The Air Force serves inaccessible rural civilian areas by evacuating emergency cases and offering dental care.

4. The Andean Mission (Misión Andina) started as a U.N.-supported organization in 1954 to try to integrate the Indian peoples of Ecuador, Bolivia and Peru into the dominant culture of their respective countries. The plan was to achieve this integration through betterment of housing, roads, food, education and health. Ecuador nationalized the Andean Mission functions in 1960, and in 1970 it became an integral part of the Ministry of Social Welfare. During its earliest stages the staff consisted chiefly of doctors and paramedical staff since health was stressed. Later, engineers, agronomists, agriculturists, and educators were also brought in.

The Mission first started in small communities of 300-1,200 persons, but they are now working in larger ones comprising 10,000-15,000 persons in which health services are integrated with cooperatives and with fish and wildlife activities. In each of their seven zones, there is one doctor, one nurse,

one sanitary inspector, one dentist, and a variable number of auxiliaries. The auxiliaries live in the areas while the professionals usually live in the main city of the province. The medical program provides vaccinations (diphtheria, whooping cough, tetanus, and at times, polio), maternal and child care, and environmental sanitation (latrines, septic tanks, and wells). The Ministry of Public Health makes vaccines available. There has been some talk of integrating this service into the MSP. Symbolic of beginning integration is the fact that training of staff is now being done in Quito and Cuenca by the MSP. The representative of the Andean Mission with whom we spoke thought full integration would probably reduce the efficacy of the program.

5. The Malaria Eradication Program (SNEM), until 1969 a separate program under the MSP, has been integrated into the MSP structure as one of the programs within the Division of Epidemiology of the Directorate of Technical Services. With malaria going from about 1,350 cases in 1968 to 50,000 cases in 1969 as a result of monetary difficulties and concurrent relaxing of activities, the Government of Ecuador quickly made funds available and restructured the SNEM organization. The number of cases has now been reduced to about 10,000. USAID extended its loan covering parts of SNEM operations until the end of 1972 and is currently assisting the MSP in utilizing the existing

infrastructure of the malaria eradication program for dissemination of family planning information in rural areas.

In the malaria zones of Ecuador, SNEM has one voluntary collaborator for every six hundred people. These collaborators were chosen by the spraying teams as they made their rounds during the attack phase. They would ask in each home which person in the village would be the best one with whom to leave medicines and slides for the collection of blood. At the end of the cycle of spraying the nominations were tabulated and the most popular person was approached to be the collaborator. The collaborator has two main functions, to make blood slides of all people who come down with fever and to give them presumptive malaria treatment. The slides are then sent into the zonal headquarters for examination and if a slide turns out to be positive, the person is followed up by the auxiliary, the full-time paid SNEM worker of that area.

The auxiliary visits all of the voluntary collaborators every month. He also visits homes in specified areas to determine if all patients with fever have gone to the collaborator for blood test and treatment. The auxiliary also visits schools for health education. The auxiliaries are supervised by sector chiefs and there is an overall supervisor for each five or six sectors. Above the supervisor is the chief of the zone, which may contain as many as fifteen to twenty sectors.

B. External Assistance

1. Multilateral

The Pan American Health Organization (PAHO) has a number of technical people stationed in Ecuador. The Country Representative has been working with the MSP in the development of its Five Year Plan which will have as a major goal the extension of health services to rural areas. A Regional MCH/Population Advisor has been involved in the Ecuador Five-Year Plan for family planning activities. PAHO also has malaria advisors in the country and is planning to assist in improving the epidemiological capabilities relative to eradication of malaria.

The United Nations Fund for Population Activities (UNFPA) is in the process of considering support for the Ministry of Defense family planning project, which has been receiving funds since its inception from USAID.

The United Nations Development Program (UNDP), through the Food and Agriculture Organization (FAO), is supporting a four-year program to strengthen the National Agricultural Extension Service. The UNDP has also been cooperating through technical assistance in the control of eradication of hoof-and-mouth disease.

The Inter-American Development Bank (IDB) has made technical assistance available for agrarian reform programs of lands owned by the Roman Catholic Church. To date Ecuador has

obtained from the IDB over \$28,000,000 for supplying potable water and improvement of sanitation and may soon receive another \$17,000,000 loan for the same purpose. A large investment has also been made with IDB funds for the reorganization or the administration and curriculum in institutions of higher education and for expanding their facilities. Technical assistance has been made available for improvement of technical training.

The World Bank (IBRD) has made large loans for road construction in the southern region, which will facilitate extension of health services to more remote areas.

2. Bilateral

United States-USAID has made major inputs into the Ecuador programs for family planning, nutrition and malaria control. USAID began its support for a project on responsible parenthood in 1966, collaborating with both the MSP and the MD. This helped to develop the MSP Population Department, to increase the number of health centers giving FP services, to train large numbers of doctors, nurses, social workers, and auxiliaries, to develop programs for audio-visual input, to install an evaluation system and include population content in training of primary and secondary school teachers.

USAID support of malaria eradication activities through loans will terminate at the end of 1972, except for the new project designed to utilize SNEM infrastructure for family planning education and promotion.

USAID is proposing a loan for FY 1974 at \$2.5 million for the further development of rural health services, with the expectation that this would have an immediate impact on the quality of life of low-income rural people. The infrastructure created would spread MCH/family planning activities into areas not now served.

USAID is now supporting a project to improve the nutrition of pre-school children with the expectation that children free from debilitating disease and malnutrition will encourage families to plan fewer children.

Another project provides for the costs of including population dynamics and family planning in the curricula of the three medical schools.

USAID has also been supporting a program with the Ministry of Social Welfare in which social workers in 81 communities are motivating rural couples to go to rural health centers, including those of the Andean Mission, for services.

3. Other countries

Germany has been carrying out a technical assistance project of agricultural development in one province. It has also given a large loan for the utilization of subterranean water for irrigation and drinking. It has also made investments in the improvement and extension of primary and technical education.

delivery system. One successful project of the SOLCA has been the assumption of responsibility for the examination of all Papanicolaou smears taken during examinations related to family planning services in the government health centers. AID had made long-term technical assistance available to train necessary technical personnel for this project.

D. Manpower and Womanpower

1. Medical Schools

The three oldest medical schools of Ecuador, in Quito, Guayaquil, and Cuenca, graduate about 120 physicians a year. A fourth school, in Loja, is in its third year and therefore has not yet had a graduation. The curriculum extends over seven years, which include one year of internship in a provincial hospital and a second year in a health sub-center.

2. School for Obstetricians (Mid-wives)

There are three schools to prepare these high-level mid-wives, one in each of the universities at Quito, Guayaquil, and Cuenca. The curriculum is five years long, including one year of rural practice. About 30-35 obstetricians are graduated per year. These professionals prefer to remain in the cities where there is a demand for them and where they can command a better salary.

3. Nursing Schools

There are five nursing schools in Ecuador that graduate only about 45 nurses a year. The course is three years in length plus one year of rural service.

4. Auxiliary Training

Auxiliary nurses are trained in the rural areas. Preferred candidates are those from the areas where the courses are offered. Courses are also given for x-ray technicians, laboratory technicians, sanitary inspectors, and home economics technicians.

There are approximately 2,000 physicians in Ecuador, a ratio of 3.3/10,000 population, the greatest concentration being in Quito and Guayaquil. In localities of less than 100,000 inhabitants, the physician/population ratio is 1.6/10,000. There are only 150 physicians in all rural areas.

There are approximately 520 nurses in Ecuador, a ratio of .9/10,000 inhabitants. In localities under 100,000 there are only 141 nurses, a ratio of 0.3/10,000.

Auxiliaries total 2,500 for the country, of which 1,100 are trained. This represents 4.1/10,000 inhabitants.

A great deal of in-country short-term training will be going on in Ecuador during the next two years to better qualify staff of different ministries to carry out family planning programs. Personnel of the following governmental institutions will

be involved: Ministry of Social Welfare, Andean Mission, Rural Medicine Program, Health Center Directors, Doctors and Nurses of the MSP, School of Nursing, School of Midwifery, Doctors of the National Police, Social Security Institute, League Against Cancer, Ministry of Education, Ministry of Defense, Ministry of Agriculture, Obstetrics/Gynecology Societies of Quito and Guayaquil. Fifty-nine courses are planned for about 2,500 participants. There will also be 80 participants receiving longer-term (up to two years) training in other Latin American countries or in the United States. All of this training is supported by USAID.

E. Budget

1. Current budget of GOE = \$240,000,000
2. Appropriation for Health = \$ 24,000,000
3. Percentage of total budget dedicated to Health = 10 percent

The Government of Ecuador has been going through a reorganization process to integrate the activities of many of the ministries in terms of an overall plan for economic and social development, including the areas of education, housing, and health. A five-year plan for health has supposedly been approved and financed for the next two years. This Plan, which is of great interest in terms of government investment in health, was to be in our hands at our departure but has not been received to date.

IV. DEIDS - Special Considerations and Criteria

A. Official Invitations from Host Country and AID Mission

The Minister of Public Health expressed his great interest in DEIDS prior to and during our visit. This interest was also indicated by the activity of the MSP Technical Council, which included choosing 3 possible areas for a DEIDS project, by meetings scheduled for us with the Technical Council, and by the time MSP officials took to accompany us into the field.

The Family Health Division Chief and the Mission Director of USAID/Ecuador were most helpful in arranging our visit and repeatedly mentioned their hope that Ecuador would be decided upon. The Family Health Division Chief accompanied us on all our tours.

B. AID Washington and PAHO Opinions

1. The Ecuador Desk, the Development Resource Office and the Latin America Population group of AID/W all agree that Ecuador is an appropriate country for a DEIDS project.

2. PAHO, Washington, considered Ecuador appropriate and their Representative in Ecuador was enthusiastic in his efforts to persuade us that Ecuador would be suitable. He

served as a major spokesman during our meeting with the Technical Advisory Council of the MSP.

C. Previous Health Innovations

1. Perhaps the most exciting innovations we came across were several programs which use health promoters. The original program was set up in Puyo, the main town of the Eastern Province of Pastanza. With only one health center for the entire province and with the desire to expand health services to the very rural Indian communities, the Center Director, who was also Provincial Health Director, set up a training program for persons selected from these communities. The first course was in 1968 with seven participants and the fourth course in 1972 with ten students.

The 46 week training program aims at teaching the promoters to recognize and treat common illnesses, to assist the people of their communities to develop better health practices, and to be able to assist women in normal labor. The great majority of the promoters are working in their communities, where the community itself has developed a small pharmacy (botequin) in which the promoters see patients and prescribe in the mornings, also selling the appropriate drugs. In the afternoons, they go into the community where they discuss preventive health

measures like water purification, vaccinations, waste disposal, and family planning. They do the groundwork for campaigns and family planning lectures by the Provincial doctor, who visits periodically. The promotores try to get the women to go to the health center for at least some pre-natal care and for complicated deliveries, or ask the doctor or trained mid-wife (obstetrician) to come to the community. At times it is necessary for the promotores to conduct deliveries, as lack of transportation prevents more skilled staff from arriving. Promotores receive no salary, but make a small profit on the sale of drugs at a controlled price. In some communities, the promotores have had a modest income serving as the "postmaster". The director hopes that community financial contributions will make the promotores operation self-sustaining.

The most recent variation of a promotores program is just beginning in the Parish of Deleg in the Province of Asuay. It is being planned by the Southern Region Health Director with the cooperation of the medical school at the University of Cuenca and several Peace Corps nurses and nutritionists.

Another variety of a promotores program was visited in the Amazon Basin at the town of Zamora. There the training and supervision was by a voluntary organization, a Franciscan

Order. These trainees were called "leaders" and were being instructed not only in health and nutrition, but also in sewing and other aspects of home economics in a course that was expected to last about nine or ten months. These girls had been selected by the local priest and will return to their villages and be expected to support themselves by sewing or to get their support from their families. The girls were aged fourteen to eighteen and most were not married. About half of them were of Indian origin.

Despite the complete commitment of the Health Director of the Southern Region to the pilot programs in process in his region, the MSP at the national level has thus far done little more than "authorize" its continuation.

The team agrees that these promotores programs may have a major impact on health delivery at the periphery and would probably be applicable to a DEIDS type of project. The very good recordkeeping, apparent knowledge and integrity of the promotores, the increased patient load month after month, and the regular supervision by the health center nurse or obstetrician were impressive.

2. The reorganization of the MSP over a year ago changed their P/FP program from one that depended upon the cooperation of the director of the MCH program and local health center directors to one that is integrated into the health delivery

3. In 1970 the Ministry of Defense signed an agreement with the USAID to secure help in the establishment of a family planning program. It was the first such agreement between AID and an MD in the world. There are now nine health centers and nineteen sub-centers of the Armed Forces carrying out family planning activities, these being coordinated with the MSP. Plans for 1973 will expand these activities to three other centers and six more sub-centers. The previous director of the MD family planning program is now the Minister of Public Health. It is expected that the UNFPA will help support MD activities in family planning in future years.

4. The "Women's Medical Society", through a clinical and educational program run by just a few of its members, has provided family planning services in many rural areas of Ecuador as well as in the cities. They have been involved in developing the family planning activities for the National Civil Police Force and have been motivating citizens through movies and lectures scheduled in schools, market places, and other public areas.

5. The program of the Ministry of Social Welfare, in which social workers motivate rural couples in family planning and direct them to appropriate health centers for services, is an interesting approach. The community is organized by the

system as a department equivalent to MCH. This guarantees family planning services in all health centers and other service clinics of the MSP.

In 1970 an Evaluation Unit for Family Planning Programs was established within the MSP under an AID contract with the International Institute for the Study of Human Reproduction of Columbia University. This group started its activities by doing an exhaustive inventory of health center resources throughout the country, covering such aspects as accessibility, population covered, personnel, services given, stage of development of family planning programs, equipment and supplies, efficiency, filing and record systems. They followed this with studies on knowledge, attitudes and practices of the personnel of the MSP Center relative to demographic problems and family planning and a study of acceptance of family planning methods by the population. Not only did this Evaluation Unit work with the MSP program, but also with those of the Ministry of Defense, the Association for the Welfare of the Ecuadorean Family, the Social Security and smaller programs run by other official and private groups, and has devised a system that will unify reporting throughout the country. The information compiled by this unit would be most useful if a DEIDS program were to be established.

social workers to discuss and study their problems in general, with health as one of the aspects. It is the community which finally comes up with the desirability of family planning for the family well-being.

6. A program initiated by World Neighbors in cooperation with the YMCA and which resulted in the creation of the Ecuadorean Center for Family Education (CEEF) brings sex education and family planning to public schools of the Quito area, working mainly through parent-teacher organizations. Teacher training has also been done in cooperation with the Ministry of Education.

7. The Ministry of Production (Agriculture) plans to launch a pilot project to prepare home economists and agricultural extension workers to do family planning motivation in rural communities.

8. The MSP is now developing a program to utilize the malaria eradication infrastructure for dissemination of family planning information in rural areas.

9. To what extent non-allopathic health personnel are utilized could not be ascertained. We did learn that there are many indigenous mid-wives as well as curanderos throughout the country. In the Indian communities where the health promoters are operating, we were told that the indigenous mid-wives and curanderos are on their way out.

D. Readiness of the Ministry of Public Health for DEIDS

At the meetings our team had with the Technical Advisory Council of the MSP, it was apparent that DEIDS had been under discussion by that group and that it had very active interest in it. The Minister himself was cautious in his comments, but this low-key manner probably does not indicate a lack of interest on his part. The MSP of Ecuador has demonstrated a flexibility of action in terms of the several innovations that have been instituted. When we mentioned our enthusiasm over the promotores programs visited, it seemed as though the Advisory Council might consider altering the five-year plan to include it.

Certainly the willingness of the Director of Local Services and of the Regional Directors to travel with us was an indication of the desire on the part of the MSP for DEIDS. These people were very intelligent and knowledgeable, although lack of funds for travel has reduced their ability to supervise which should be an important part of their roles.

E. Extent and Potential for Involvement of Other Government Departments and Agencies

Inter-ministerial cooperation already exists between the Ministries of Education, Public Health, Agriculture and

Defense. In the country-wide family planning program there is already coordination between Government agencies and private entities.

The National Development Plan calls for integration of services not only in the field of health, but also in sectors such as transportation, education, housing, and frontier integration. This plan has encouraged large scale investment in Ecuadorean development by multilateral agencies, foreign governments, and private organizations.

F. Institutional Bases

A DEIDS project in Ecuador would probably be administered through the Ministry of Public Health, possibly in a somewhat autonomous unit that could have direct access to the highest echelons in the Ministry.

A group like the Evaluation Unit in the MSP could probably serve DEIDS in the evaluation aspects. The Center for Motivation and Evaluation (CEMA), a private group in Ecuador, has expanded from its initial purpose of engaging in sensitivity training. It has been used in evaluating a few of the USAID-supported projects and may also have merit relative to DEIDS.

Training for several categories of health workers has been discussed in III,D. The MSP has been training its own auxiliaries but has also utilized the training capabilities of

one of the Protestant Missionary Hospitals and of the Association for the Welfare of the Ecuadorean Family (APROFE).

G. Current or Imminent DEIDS-like Projects .

None came to the attention of the team during our reconnaissance work in Ecuador.

ITINERARY

October 24 - November 2, 1972

October 24

Three of the members of the team arrived in the morning to join the other two members who had arrived the day before. In the afternoon we all met in the office of the Chief of the Family Health Division of USAID/Ecuador to discuss the proposed plans for our stay with him and the Director of Local Services.

We then had a briefing session with the Director, USAID, which was followed by a meeting with the Minister of Public Health.

October 25

In the morning, our team met with the Technical Council of the Ministry of Public Health, which consisted of the Director General of Health and nine other persons who were Directors of Divisions or Departments. The Country Representative of the Pan American Health Organization was also present.

In the afternoon, we met again with the Director of Local Services to finalize plans for field visits. We then

had meetings with the persons in charge of the Population Department of the MSP, the staff (Air Force, Navy and Army) of the Department of Defense Family Welfare Division and with one of the principals of the Misión Andina.

That evening the Chief of Family Health (USAID) arranged a reception at which we met most of the leaders in the health field in Ecuador.

October 26-27

We left Quito via automobiles to visit health facilities in two proposed demonstration areas. USAID Chief of Family Health, Director of the Central Health Region, and the Director of Local Services accompanied us. We had the opportunity of visiting provincial hospitals, health centers, sub-centers, dispensaries and one cantonal hospital in the Provinces of Bolivar, Chimborazo, and Los Rios.

October 28-31

Three members of the group visited the hospital and health centers in Babahoyo and Quevedo, before continuing by plane to the Southern Regional areas of Loja and Zamora in the Provinces of the same name. Visited in the Loja-Zamora areas were the health center in Loja, the sub-center, in Malacatos, a dispensary in Vilcabamba (an area in which there are an unusually high number of persons over the age of 100),

the hospital, health center and "lideres" training school in Zamora, and a sub-center in Yanzatsa.

Two members of the group separated from the others on October 28th. They spent a few hours with the Director of the Evaluation Unit for Family Planning Programs in Guayaquil. They then flew to Cuenca where they had the opportunity of meeting with some of the staff developing the new course for promotores.

They then took the plane to Quito and a five-hour jeep ride to Puyo in the eastern tropical area of the Province of Pastaza. During the afternoon of the 30th and all of the 31st they observed the operations of outreach services of the promotores program. They visited five Indian communities in the Puyo region which now have "botequines" and promotores functioning in them.

November 1

Team members all arrived in Quito where we discussed our different trips.

Some of the team met with the part-time Chief of the Division of Development and Health, who is also in charge of the Preventive Medicine Department of the Social Security medical service.

In the afternoon, our full team debriefed with the Technical Council of the MSP and that evening attended a reception given by the Minister.

November 2 (Holiday in Ecuador)

Met with the Director and the Chief of the Family Health Division, USAID, for debriefing.

CONTACT LIST

1. Dr. Raúl Maldonado Mejía, Minister of Public Health
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12. Dr. Ernesto Iturralde, Chief of Ministry of Defense Medical Programs
13. Dr. Mauro A. Rivadeneira, Central Office, Misión Andina
14. Mr. Charles Nieman, Director, CARE
15. Mr. Richard Redder, Director, Catholic Relief Services
16. Dr. Hector Donoso, Chief, Central Health Region
17. Dr. Mario Jaramillo, Chief, Family Planning Evaluation Unit, MSP

18. Dr. Fabian Jaramillo, Director, Pastaza Provincial Health Service
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22. Beverly Hammons, Nutritionist, Peace Corps staff, Deleg
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24. Mercedes Torres, Educator, Peace Corps staff, Deleg
25. Dr. Vicente Ruilova Sánchez, Chief of Southern Regional Health Services
26. Dr. G. Arregui R., Director of Health for the Province of Bolivar
27. Dr. Jaime Velarde, Director of Health Center, Guaranda
28. Dr. Gallo Salto, Director of Medical Services, Guaranda Health Center
29. Dr. Galo Saltos Chavez, Microbiologist of the National Institute of Hygiene, Guayaquil
30. Dr. Hugo Guillermo Gonzales, Director of Health for the Province of Loja
31. Dr. Hugo Corral, Chief, Department of Population, MSP
32. Dr. Mario O. Moreno C., Department of Population, MSP
33. Dr. Segundo Machado, Director of Health for Province of Los Rios
34. Dr. Angel Soto, Director of Health for Province of Azmora-Chinchipe
35. Mr. Peter M. Cody, Director, USAID/Ecuador

36. Mr. H.E. (Sam) Haight, Chief, Family Health Division, USAID/Ecuador
37. Mr. John P. James, Family Planning Advisor, Family Health Division, USAID/Ecuador