

creation of a "culture of health" represents a major challenge for the Honduran society which the activities planned under this study should address.

4.2.10 Insufficient level of activities in environmental health

Environmental health is a field of emerging consciousness among health professionals and health-related sectors. High rates of population growth with its subsequent needs for agricultural production, water and energy have raised concerns about the excessive use of natural resources, especially the forest area, which, jointly with a prevailing pattern of gross neglect of environmental factors in the recent years, has led to increasing deterioration of the ecosystem.

The Ministry of Environment (SEDA) was created in 1993 to enforce the Environmental Law ("Ley General del Ambiente"), formulate environment policies and coordinate environment-related actions on the National Territory with other institutions such as Ministry of Natural Resources, SANAA and with international cooperation agencies. Its activities also include training of municipalities and institutions on environment management, delivery of environmental licenses to industries (mainly mining and shrimp growing), environment audits and investigation of environment-related complaints as well as the definition, rule setting and promotion of environmental impact assessment of industrial or development projects. The Honduras Environmental Development Project financed by the World Bank aims at strengthening institutional capacity and supports municipal projects. SEDA also participated with SANAA, DIMA, MSP and OPS in the definition of norms for drinking water and disposition of liquid waste.

Recent official initiatives linking health and environment are pushing towards regional integration through the several rounds of ECOSAL Conferences and the regional Investment Plan for Health and Environment (PIAS), discussed in the Inter-institutional Technical Committee on Environment and Health (COTIAS). This plan schedules investments for rehabilitation and new infrastructure in Environment Protection and Control (water supply, sewage, disposal of solid waste, water contamination) and Health Care (self care, peripheral health centers and hospitals), and creates an investment fund of US\$ 217 millions for the period 1992-2004 for the Latin America/Caribbean region.

The CESCO (Center for Studies and Control of Contaminants) was created in 1986, with joint funding for ten years by the Government of Honduras (Lps. 5.25 mil.), the Swiss

Government Cooperation (Lps. 2.25 mil.) and the OPS (Lps. 0.3 mil.). Its objectives are the development of an investigative and administrative institutional structure for the study and control of contaminants, with consolidation and self-financing scheduled for the 3rd phase (1992-96). Specific objectives include conducting investigations to identify chemical and microbiological contaminants, its effects and the interventions to reduce sources (with emphasis on pesticides, toxic metals, water, food and garbage contamination), developing an area of service delivery in chemicals formulation evaluation, water quality, microbiology, environment studies and developing capacity for analysis of contaminants.

Its areas of work include chemical contaminants (pesticides, toxic metals (Pb, Cu, Cd, Zn), Li, Na, aflatoxins, polycyclic aromatic hydrocarbons); water quality (physical, chemical, bacteriological analysis; infrastructure diagnosis, treatment measures, decontamination and maintenance; environment and development (evaluation of the main sources of contamination: air, water, soil, food, surveillance/prevention); ecotoxicology; promotion/training/information

The most frequently expressed environmental health concerns are the problem of access to water and sanitation described above; the impact of pesticides on agricultural workers, its contamination of food products and its accumulation in some elements of the food chain and in cow and human milk; the management of industrial waste and of hospital toxic waste; and the impact of air contamination on the incidence of respiratory diseases in urban areas.

4.2.11 Insufficient level of activities in occupational health

Occupational health represents a specific subset of environmental health, to which more attention is now being directed. Honduras entered the International Labor Organization in 1959, when it elaborated the Labor Code ("Código del Trabajo"). Occupational health has benefited from the support of the International Labor Organization and the Government of Spain, for instance, in the training of worksite inspectors. Private companies, such as the United Brand, developed their own health prevention/promotion system thirty years ago.

The National Workers Health Plan, elaborated in October 1992 by the National Commission on Occupational Health, a multisectoral group, estimated the economically active population at 1,674,650, which corresponded to 31.8% of the total population. The main sectors of employment were:

- agriculture, forestry, fishing: 38%

- community/social services 20%
- wholesales/retail sales: 17%
- manufacturing industry: 15%
- construction: 4%

68.8% of this population are male, 3.6% is under 15 years of age.

In addition to the MSP, which created in 1990 the Program for Workers Health, the Ministry of Work and Social Prevision (MTPS) and the IHSS also contribute to the implementation of occupational health activities. The MTPS has a body of around 30 inspectors who recently received some training in prevention and management of occupational diseases from the Spanish Cooperation. The MTPS covers roughly 160,000 workers in all departments except Colón, Intibucá, Islas de la Bahía, Lempira, Ocotepeque, Santa Bárbara y Valle; however, it lacks economical and political support for conduction of verification activities. The IHSS covers around 180,000 persons under the complete regimen in Tegucigalpa, San Pedro Sula, Choloma, Villanueva, El Progreso, Danlí, Choluteca y Juticalpa, and gives disability coverage to workers in a number of other cities. It has developed modalities for health services delivery on worksite ("salud-empresa") in order to increase coverage and is trying to locate businesses with their own physician for affiliation. However, it does not have systematic training programs for the health personnel in the businesses.

The distribution of reported work accidents by branch of activities illustrates the different coverage from these two institutions:

The distribution of reported work accidents by branch of activities

<i>Branch of activity</i>	<i>MTPS (1986-91)</i>	<i>IHSS (1986-90)</i>
Agriculture	67.6%	1.8%
Manufacturing	24.9	55.7
Communication/transport	1.3	2.7
Mining	1.0	0.2
Utilities (water, gas, electricity)	1.0	1.5
Construction	1.5	11.9
Services	2.5	26.2

Six health problems related to the working environment have attracted particular attention from medical authorities:

- work accidents: those include mostly injuries sustained in the agricultural sector (cuts by "machetes" or machinery); specific protective devices were designed in the banana fields, such as plastic gloves or leg-protectors to avoid these cuts. In the manufacturing sector, work accidents are related to non protected or inappropriately used machinery; to ergonomic problems (i.e., machinery built for workers with a different stature); to resistance to use protective equipment (gloves, nets, etc...);
- pesticide intoxication of workers has been reported in large scale plantations of bananas (on the northern coast) and melons (in the southern departments). The MSP organized in 1994 a distance-education course for health professionals on pesticide intoxication that resulted in increased reporting of such cases; main products used are organo-phosphorus compounds (Sumithion®), chlorinated hydrocarbons (DDT), carbamates (Propoxur®) and pyrethroids;
- among physical factors, the noise is the one most frequently mentioned as a cause of disease and disability, especially in the manufacturing sector;
- the widespread use of chemical products (cement, pesticides) in the primary and secondary sectors of activity, as well as the lack of education with regards to their proper use and the high level of solar exposition are generating an increasing number of work-related dermatitis;
- more recently, the presence of labor intensive, assembly line industries ("maquilas") in the northern part of the country, with a high percentage of female work force, has raised concerns about several aspects of reproductive health;
- finally, the less than favorable working conditions associated with personal characteristics, may have an impact in the frequency of mental health problems, such as depression and alcoholism.

More specific problem in the health sector includes occupational risk for laboratory workers (AIDS and Hepatitis transmission), X-ray technicians, staff in charge of hospital waste and psychiatric hospital workers.

Little data are currently available on these topics, except for a few studies conducted by the CESSCO on pesticides in food products and human milk, and levels of cholinesterase

activities in agricultural workers. Information has started to be collected by the MTPS but needs to be organized into a usable data bank.

The Workers' Health Plan includes the creation of a National Fund for the Development of Worker's Health, financed by an increased social security contribution from workers and employers, that would finance occupational health activities (not including pensions for work-related health disorders).

4.3. Factors affecting health outcomes

4.3.1 Factors related to context

(1) Natural conditions

Honduras is situated at latitude 15 North and longitude 85 West. It has a surface of 112,088 square kilometers. The eastern part of the country is tropical forest and has limited access (plane and boat) from the rest of the country. The western part is mountainous area where coffee and tobacco are the major commercial products. The southern coastal area produces sugar cane and non-traditional export crops such as melons and shrimps. The Northern Atlantic coast is Caribbean in climate, with large areas dedicated to export production of banana and palm oil. Seventy per cent of the population lives in the central highland area, where a moderate climate prevails.

The climatic characteristics can be summarized as follows:

Climatic characteristics by geographical location

<i>Zone</i>	<i>Altitude (m)</i>	<i>Temp. (C)</i>	<i>Rainfall (mm)</i>	<i>Evaporation (mm)</i>	<i>Balance</i>
Middle land	600-1,500	21.6	891	1,463	-572
Pacific Coast	0-150	29.5	1,485	2,050	-565
Atlantic Coast	0-200	26.0	3,318	1,578	+1,740

These climatic conditions play an essential role in the prevailing epidemiological patterns, especially with regards to distribution of vector-borne diseases, a main problem in the northeastern areas. Difficult geographical conditions explain some problems of access to services that characterize the western and eastern part of the country.

(2) Macro-economic conditions

The past 15 years have not been strong ones for the Honduran economy. Weak economic growth associated with inadequate levels of savings and private investment, expanding population, a negative balance of payments, and a high level of foreign debt have all placed significant economic pressures on the population. In recent years, new initiatives have begun to address some of these problems but the challenge remains significant. Sustainable improvements in health will have to be implemented within this economic context.

During the period 1980-1989, often referred to as the "lost decade", real GDP grew at an average rate of 2.5%, half of the rate achieved in the 1960s. This average conceals significant yearly variations including negative growth in 1982 and 1983 and over 6% growth in 1987. The 1990s display similar fluctuations with 0.1% growth in 1990 and negative growth, -1.4%, in 1994 while the average for the period was 2.3%. The negative impact of this weak economic performance has been made greater by the high, 2.7%, rate of population growth. As a result, annual change in real per capita GDP was over 2.0% in only two of the 15 years between 1980 and 1994, over 1.0% in only four, and was negative in seven (refer to Table 4-3). In monetary terms, real per capita GDP in Honduras has fallen from an average of US\$ 673 in the period 1982-85 to an estimated level of US\$ 611 in 1994, a drop of almost 10%.

The weak economic performance is reflected in limited work opportunities. The formal unemployment rate has been estimated recently at 9%. However, this statistic does not incorporate the relatively high levels of underemployment resulting from a shift of workers to more part-time employment and withdrawal from the labor force. There is also considerable hidden underemployment in the large part of the labor force that is working in agriculture and other rural activities where the activities continue even when the economic rewards diminish.

Macroeconomic pressures led in 1990 to the development of an aggressive structural adjustment program supported by the government and external lenders. To offset the disproportionate impacts of the program on the poor, social compensation mechanisms were established through programs such as FHIS and PRAF. These programs have played a significant role in reducing some of the negative impacts from the program but real incomes, particularly those of the poor, fell during this period.

The impact of weak economic growth has been made worse by the high negative balance of payments. The deficit over the period 1991-1993 was approximately US\$ 525 million. In 1994, this amount was reduced to US\$ 375 million as a result of debt restructuring, import reductions resulting from the devaluation of the lempira and generally difficult economic conditions, and increases in the price of coffee, a major traditional export good. Recent improvements in the balance of payments have also been a result of expansion of non traditional exports, such as shrimp and lobster, which accounted for over 22% of 1994 agricultural and fishery exports. Expanding maquiladora production is also growing in importance, contributing over US\$ 500 million to exports in 1993.

Debt service remains a significant drain on national resources. In 1994, external debt was over US\$ 4,000 million, equal to 124% of GDP. Payments on this debt represented 4.9% of GDP, an amount almost twice the public expenditures on health and representing over 20% of the annual public budget. Since the payment of external debt is also an outflow of resources, it will have a negative impact on the balance of payments. In 1994, debt payment amounted to US\$ 200 million offsetting more than 40% of revenues gained from the sale of traditional exports including bananas and coffee.

Debt service requirements have also contributed to the chronic high public sector deficits. Most of the foreign debt, 87%, is public, reflecting loans from multilateral (55%) and bilateral (32%) lenders. Recent restructuring of much of this debt has reduced debt service requirements and improved current trade balances but public sector deficits continue to be a major macroeconomic issue. In the late 1980s, the fiscal deficit was approximately 6% of GDP, almost one quarter of public spending. As a result of the austerity program, the public sector deficit was reduced to 3% of GDP by 1991 and 5% in 1992. However, changes in budget structure and an election year expansion of public employment in 1993 resulted in a deficit of almost 11% of GDP, nearly half of the public expenditures; this was reduced to 6% in the following year.

Public sector deficits reflect weaknesses in taxation and revenue generation as well as expenditure policies. Many of the latter, debt service and mandatory allocations, are not sufficiently controllable by public authorities to be modified greatly in the short term. The relatively large volume of public sector employment and the consequent large share of public budget used to pay salaries adds to the political complexity. Few short run solutions

to these fundamental structural problems present themselves and this reality will limit both the implementation and the impacts of the actions proposed here.

(3) Micro-economic situation/poverty

Levels of poverty can be estimated through different methods, one of which is the estimation of per capita GDP. The \$611 figure mentioned above for Honduras ranks this country among the poor countries, compared to a world average of \$2,500. However, this is a very general indicator, covering important differences in living conditions.

The 1988 Household Census allowed a classification of the population according to the level of satisfaction of basic needs, as defined by a composite index of the following five indicators:

- predominant material of the house
- crowding
- access to quality water and waste disposal system
- access to primary education
- economic dependency (ratio of working people in the household + education of head of household).

According to these criteria, 78% of the households were considered as poor, i.e., having at least one unsatisfied basic need, while 31% of households had three or more unsatisfied basic needs. Departments with lowest levels of basic needs satisfaction are: Intibuca, Lempira, Valle, La Paz, Olancho and El Paraiso.

The Study's household survey provides additional elements relative to ownership and use of land and motor vehicle. The following table shows that a small proportion of urban dwellers own land in significant quantity, whereas a major proportion of rural inhabitants own or rent smaller pieces of land.

Ownership and use of land and motor vehicle by city scale

<i>1995 Household survey</i>	<i>Large cities</i>	<i>Small cities</i>	<i>Rural</i>
% Have land use	8%	18%	67%
Avg. Sup. Owned (manzanas)	12.4	18.0	3.7
Avg. Sup. Rented (manzanas)	2.0	1.8	2.1
% Own Car	20%	14%	5%

(4) Human resources

This section includes a brief review of three basic problems affecting the potential for Honduran citizens to fully participate in the process of human development as advocated by the United Nations and that also has a dramatic impact upon the population's socio-economic and health status.

1) Education: see section 4.3.2. (3)

2) Employment

The high level of unemployment and under-employment has a major impact in the overall socio-economical condition of the Honduran population. The 1993 Multi-Purpose Household Survey indicates that 5% of the Economically Active Population (EAP) was in the category of "open unemployment", meaning people without a job, that did not look for work in the previous week. However, when asked whether they wanted to work and would accept a job at this moment, a percentage of these jobless persons corresponding to 9% of the EAP said yes. This category is considered as hidden unemployment. In addition, 31% of employed people either do not work full time or do not receive full minimum salary, corresponding to the under-employment category.

Gender differences are still obvious: the proportion of under-employment is 36% among working women and 28% among men; overall, 59% of the female EAP had work problems (under- or un-employment) in 1993 and 49% for their male counterparts. However, it seems that the gap is slowly being reduced, as the female/male difference in total proportion of work problem is 11% of the age group 30 to 44, whereas it goes down to 2% in the age group 20 to 29 and to minus 4% in the 15 to 19 age group.

3) Women in the development process

The historical and cultural context in Honduras, as well as the deterioration of general socio-economic conditions within the last decade has both contributed to determine the present condition of women, still characterized by inequality.

The deterioration of living conditions and rapid population growth have led to significant rural-urban migration, more frequent among young women, especially with the recent installation of labor-intensive, duty-free industries ("maquilas") in the northern sector of the country. The negative impact of the economic crisis, especially for single female heads of

household (which represent one fifth of the families, one fourth in urban areas), has been mitigated by a greater women's participation in the labor force (including the informal sector) and the adoption of survival strategies. However, this relatively new involvement of women in activities beyond the domestic sphere has not been adequately recognized, nor has it generated sufficient acknowledgment of the limitations caused by current values and attitudes of the Honduran society; the prevalent model is still that of subordination and dedication to household tasks and child care. The domestic inequalities are aggravated by "machismo", irresponsible paternity and intra-familial violence.

Discriminatory models produce a series of limitations on the women's lives, such as very low level of control over their reproductive life, resulting in high frequency of teenage pregnancies and high fertility, with a subsequent heavy domestic workload. Maternal mortality remains the first cause of death among women in reproductive age. Though the access to basic education has improved in the past years (the illiteracy rates and matriculation rates in primary and secondary schools are the same as those of men), women's participation is still lower in the university, where they are concentrated in careers traditionally identified as feminine.

As noted above, the participation of the women in labor force has increased in recent years, now representing one third of this population, especially in the areas of commerce and services, including the informal sector. Yet, this increased participation has not always resulted in better conditions, as parts of these jobs are relatively unstable and under difficult conditions, not withstanding the fact that domestic work still implies a double responsibility. The proportion of women in managerial positions is still very low. The participation of women in self-sufficiency agriculture work (livestock, process of agricultural products) is still unrecognized. Legal aspects of the Agrarian Reform also limit women's participation and ownership in cooperatives.

Despite official political support for a better integration of women into development, manifested by the agreement on several international treaties and conventions since 1974 and the adoption of specific development policies, the effective application in projects and programs of the gender focus is still deficient in terms of eliminating male/female cultural stereotypes and relieving the woman from the burden of her pre-assigned domestic/child caretaker role.

(5) Regional development

In spite of the promotion of decentralization policy, there is a lack of systematic regional development strategy in which each regional characteristics are well considered, except for the two major cities. Even in these, the development activities have responded, rather than anticipated the population movements of the last decades, thus leading to major problems in the delivery of municipality- and state-provided services to densely populated, unplanned settlements, located in those fringes of the city most affected by erosion and floods, and most often without legal title to the land. Only recently the city of and San Pedro Sula has elaborated a more proactive urban development plan (1992-2012). Yet regional development planning is essential for the future development of the country and well-being of the population.

Given the saturation level reached or close to be reached in the two metropolis, especially in Tegucigalpa, efforts should be dedicated to the promotion and development of new "poles", centered around smaller cities such as Comayagua, Choluteca, El Progreso, Juticalpa, La Ceiba, Tocoa, Trujillo, where agricultural resources coexist with potential for industry and services development. These new development poles, offering good employment opportunities and well provided with locally managed social services (health, education) will then attract the migrant population from the rural dispersed areas and could even contribute to reverse the population movement towards the large cities, thus decreasing the burden of dealing with marginal urban areas. Obviously, these efforts should not deter from the need to conduct dispersed rural area development programs in order to improve equity and reduce the differences in living conditions, in spite of the high costs of these programs.

(6) Access to food

Lack of integrated food security policy, insufficient allocation of land, primitive knowledge on agricultural technology, a limited access to cash income / financial support, insufficiency of marketing system / infrastructure and lack of nutrition education are the main causes of limited access to food in poverty areas.

In Honduras, the domestic supply of major cereals was insufficient during the period 1974-1993, with an annual rate of production increase of 2.7% for corn, 1.7% for kidney-beans, 6.5% for rice and 2.1% for sorghum, with an average growth rate lower than that of population (3.2% ; refer to Table 4-4)

1) Government policies

Two policy statements have been published from the government. The first one is "Lineamientos de Política de Seguridad Alimentaria Nutricional, 1995-1998" (Guidelines for policy on nutrition and food security) issued by SECPLAN. It relates to planned strategies and priorities and to those currently implemented, including:

- i) global and integral approach to food security
- ii) increased production of basic grains, horticulture, fruit, meats and poultry for domestic consumption,
- iii) prioritize actions for the poor and vulnerable groups,
- iv) strengthening social services and infrastructure for food production (credits, TA, marketing),
- v) extend coverage and
- vi) improve quality of MCH services,
- vii) strengthening social participation,
- viii) modernizing public administration,
- ix) strengthening municipalities in obtaining food and nutrition requirements at family level, and
- x) guaranteeing basic sanitary conditions towards better use of foods.

There is no reference to national target for uptake level of calories, fat and protein.

The other policy is the "Plan Agrícola para el Desarrollo del Campo, 1995-1998" or PROAGRO, (Agriculture plan for field development) issued by Consejo de Desarrollo Agrícola -CODA (Agriculture Development Committee). It relates to the agricultural policies within the macroeconomic framework and the sectoral topics which emphasize:

- i) access to land ownership,
- ii) rural financing,
- iii) market information,
- iv) renewable natural resources,
- v) irrigation,
- vi) generation and transfer agricultural technology,
- vii) agricultural sanitation,
- viii) agro-industry, and

ix) fishing.

2) Present action on agricultural development

UNDP has shifted from its previous "Project-wise Approach" to "Program Approach", which needs better coordination, and focuses particularly on poverty alleviation and education. On the other hand, FAO still emphasizes technical cooperation style which will solve bottlenecks in technology. It recently concluded its projects on "Training for slaughterhouse module operation" and "Coordination and harmonization for residual pesticides and its control".

Many bilateral donors and NGOs are working independently in agricultural development to solve food security problems in the country. Almost all projects include not only a direct production component, but also supporting components such as access to credit, nutritional education and market information system. Such supporting systems are very important to improve farmers' living standards.

The function of Sec. RRNN is only one of coordination, since they do not have the capacity to monitor and evaluate the achievement of projects.

3) Present action on "Food Security"

Much effort has currently been done by two institutions: CARE, funded by USAID, and PRAF, supported by UNDP and funded by the Central American Bank for Integration and Economy (BCIE). They both assist the Central Government in the implementation of the social compensation program through the food security strategy and cooperate with the MSP.

CARE has been working for more than 40 years in Honduras. Currently it has 27 regional extensionists and 10 technical managers with a budget of Lps. 4.7 million per a year. They are focusing on basic food supply, diversification of crops and training of health workers. They also recently started development of employment opportunities projects in rural areas of each region. CARE is starting to establish "Management Monitoring Systems" and "Baseline Surveys" which include measures of health status, family income, agricultural production and calories uptake by family.

PRAF has issued "Food Coupons" to mothers heads of household for which family monthly income is less than Lps. 400. There are two expected effects of issuing the food coupon: to

increase school attendance for children and to promote attendance to health services. PRAF also promotes survival strategies of rural women by assisting in acquisition and operation of micro-business. Training and small seed funds are provided. In some instances, capital for such business comes from food coupons and housewives participating become shareholders. A manual entitled "Tiendas Rurales de Consumo" has been published by UNDP and is a good example of self supporting activities.

USAID recently implemented an impact evaluation of its PL480 food programs (including food distribution in health centers, food for work and PRAF-administered coupons).

FAO has just started a project to strengthen the food and nutrition activities in Honduras on request from the government. The project components include:

- i) Food and nutrition policy,
- ii) Food security for family level,
- iii) Micronutrients,
- iv) Nutrition education, and
- v) Quality control.

Although the government agencies concerned with this project are SECPLAN and MSP, close collaboration of various NGOs will be needed to decide future directions.

(7) Water, sanitation and other environment

1) Master / Action Plan for Water and Sanitation

UNICEF/SANAA has initiated the Preparation of Municipal Water and Sanitation Plans for the national level. The aim is to obtain funds to implement the municipal plans based on low cost technologies and to promote the rational use of water and financial resources. Infrastructure construction for water projects is being managed by MSP in small communities and by SANAA in larger ones. A few cities, such as San Pedro Sula (with DIMA) manage their own system, an orientation strongly supported under the State Modernization plan.

To promote the decentralization of water management and services to the municipalities, training of technicians in water storage, liquid waste and sanitation areas has begun in 35 municipalities. Eventually enough municipality technicians will be trained to undertake and manage the municipalities' water and sanitation plans.

2) Urban Areas

(A) Tegucigalpa

The water supply of Tegucigalpa comes from surface water (95%) and underground wells. Surface water is supplied by the water systems at El Picacho, Los Laureles, and Concepcion. Concepcion has chlorination and rapid filtration of the water and supplies about 1,200 l/s i.e. 60-70 % of the surface water to Tegucigalpa. With the completion of the rapid filtration plant in Picacho, its capacity will be about 900 l/s which drops to about half during the dry season (Feb.-May). Los Laureles supplies about 500 - 600 l/s and has both chlorination and rapid filtration of the water supply. Wells are located at various parts of the city and are generally do not include water treatment.

Not all the city areas have 24 hour supply of water. SANAA controls and rations the water supply to the various city areas due to the lack of water and the constraints in water supply system. A large number of residents in marginal areas of Tegucigalpa are not served by piped water supplies and therefore have to buy water from trucks or nearby wells.

The sewage collector system in Tegucigalpa is about 30-40 years old. It has exceeded its useful life and there is about 60% leakage. There are 52 kilometers of sub-collectors and collectors and the majority of the collectors are in poor condition or damaged. The collector network is generally in good condition, with a length about 650 km. A partial study was conducted in 1992 to improve the Tegucigalpa sewage system which included a treatment plant. This study also covered sewage system improvement in other big cities as well as 23 small ones. IDB is currently extending a loan to complete the study and to design of Tegucigalpa's sewage system and has earmarked US\$ 50 mil. for the improvement / rehabilitation of the system.

New water and sewage network are undertaken by private developers, according to standards set by SANAA. Upon completion of the network, it will be transferred to SANAA for operation and maintenance. This transfer from private developers to the government sector also applies to San Pedro Sula Municipality.

(B) San Pedro Sula

DIMA which manages the water supply in San Pedro Sula was founded in 1976. Presently the water coverage in the urban area of SPS is 90% and that of sewerage systems is 65%. 70% of the water are from underground source whilst the remainder 30% is from superficial

source. Existing water sources include five reservoirs and 81 wells. The SPS Master Plan for Drinking Water, in cooperation with World Bank & British Commonwealth Development Corp., seeks to meet the city's water needs through 2010. Phase I of this master plan is 98% completed and will end in 1996. Major components of this master plan are: improvement of water supply system in the urban area; construction of water treatment plants (being undertaken now by the Japanese contractor under grant aid); and water supply to areas which do not have water supply at the moment.

At the moment, there is no sewage treatment. The sewage is discharged into the Chamelecón River. The main concern of the sewage disposal system is with the maintenance of the collectors and construction of treatment plants. The Inter American Bank of Development has conducted a study of the water treatment requirements. The study recommends either the oxidation lagoon or the treatment plant method for dealing with the sewage. DIMA has not decided which method to adopt. If DIMA implements the recommendation of the study, the coverage will go up to 90%. Their goal is 100% coverage in the years 2005-2010.

Two years ago, DIMA issued instructions to the industries to implement waste treatment before discharging their waste. After a grace period of 3 years, DIMA will start imposing fines/penalties if the industries do not comply with the instructions and discharge standards.

(C) Urban Marginal Areas

Around the big cities like Tegucigalpa and San Pedro Sula, migrations of people from the rural areas have created haphazard and unplanned settlements in the marginal areas of the cities.

In the case of Tegucigalpa, there are 218 "barrios marginales" (marginal neighborhoods) with a population of about 400,000 inhabitants. These marginal areas are located on hilly slopes without proper water, sewage and rubbish disposal services. The water supply to these areas is secured by private water truck delivery, common water faucet, and /or private water network schemes. The UEBM (Unidad Ejecutiva de los Barrios Marginales) was created with funding from UNICEF and technical support from SANAA to solve, among other issues, the water problem in the marginal areas. Their approaches to supplying water are: water supply by trucks; development of wells in the area; and water supply from water mains to tanks built in the community. Their objective is to eliminate or reduce the need to

buy water from mobile private vendors. The positive impact of the projects clearly shows its viability; plans exist to apply the methodology to other cities with similar problems.

In San Pedro Sula, the municipality has planned new settlement areas for new arrivals and relocation of people from river banks and areas designated for development needs such as road widening. These settlement areas are provided with water, electricity and garbage disposal services.

3) Rural Areas

The rural areas do not generally have piped water supply or sewage network. Their water supplies are from individual wells or springs which are located close to the communities. Latrines, if any, are simple pit latrines.

4.3.2 Factors related to household and community behaviors

(1) *Cultural/anthropological aspects*

1) Ethnic groups and traditional beliefs and practices

Honduras still counts with around 9% of ethnic population, divided between several major groups (Garifunas on the northern coast, Miskitos in the eastern part of the country, representing jointly about 2% of the population, Lencas (6%) in the western mountains, Pechs, Xicaques, Tolupanes and others). Findings from the study team agree with a number of other studies in that there is little cultural resistance, among these populations, to accept the institutional health services provided by the government. Those services come as a complement to traditional providers, used for more traditional conditions, such as "empacho", "mal de ojo", etc... Indeed, people living in the isolated areas emphasized the poor accessibility due to insufficient extension of the network of health services and providers and to the high cost of medicines in private drugstores. Interestingly, the MSP and NGO health providers in the Lenca area of La Esperanza have been promoting the use of traditional herbal medicine, whereas this aspect of traditional health care is slowly disappearing in other ethnic cultures such as the Tolupanes. On the other hand, traditional providers do keep a stock of western medicines that they give to some of their patients.

The brief field visit by the Study's anthropology team to mountainous, isolated sites also provided information on characteristics of rural poverty (poor agricultural techniques, low

access to credit), poor housing conditions, constituting high risk factors for vector-borne diseases and ARI, and insufficient basic diet.

Education level and ethnic background are the factors mostly associated with the persistence of traditional believes, especially in the Lenca population (refer to Volume 3, Supporting Report).

An important implication of delivery of health care services for ethnic groups is the need for providers that at least understand, and ideally shares the beneficial knowledge and believes of these groups. It is also important to notice some special characteristics of the two coastal groups:

- the Miskitos, despite difficult conditions of access, evidenced by the highest maternal mortality rate in the country, tend to look more frequently for institutional health services (see section 4.3.3.) and a slightly lower prevalence in traditional believes;
- the Garifunas have somehow better living conditions and specific diet which induces different epidemiological patterns (higher prevalence of cardio-vascular diseases).

2) "Machismo", women' status and sexuality

Among the Latin population of Honduras, the most influential cultural pattern is the country's brand of "machismo", mostly sustained by male attitudes and behaviors, but also imbedded in women's education and perspectives. "Machismo", with its corollary of fatalism, is commonly held as the most important causal factor in the persisting lower social status of the woman, high fertility rates, irresponsible sexuality and fatherhood patterns, resistance to more extended use of effective family planning methods and diffusion of STDs and AIDS. However, it should be noted that persistent high fertility role models in ethnic population also correspond to concerns with population survival.

(2) *Community participation (Social aspects)*

1) *Current situation of existing activities*

In order to assess the extent of permeation of social participation related to the health sector, 17 existing projects, recommended by the concerned ministries and organizations as successful examples, were reviewed by the study team during the phase II Study.

According to the PAHO definition, there are three stages in the "social participation": "utilization" of existing services or institutions, "cooperation" in implementation, and

"involvement" in planning. Based on this definition, the following three categories were developed for the assessment of the Study:

Category A: Projects which require community participation in supporting roles only. In this category, community members are included in projects according to the needs for specific assignment. They are fully dependent upon external executors for planning.

Category B: Projects which train community members to make them reach self-sufficiency level. In this category, community members receive training, but are not involved in the decision making process.

Category C: Projects which include community members in the actual planning process. In this category, community members form part of the directive board of projects, with a voice in their management and development.

The results of the assessment of existing projects are shown below:

2) Integrated projects : projects integrated with different fields including health.

Category A:

- "Family Center" (Olancho) by INFOP
- "Food and Nutrition Program" (Goascoran, San Marcos de Colon, and other municipalities) by JNBS

Category B:

- "Integrated Development Program, Mosquitia" (Gracias a Dios, part of Olancho, Colon) by MOPAWI

Category C:

- "DRI-Yoro" (6 municipalities in Dept. of Yoro) by RRNN
- "Strategy of Participatory Development for the Strengthening of the Municipality" (Municipality of Central District) by Municipality of Central District
- "Project HON 91023 Support to the Municipality of SPS" (5 sectors of Municipality of SPS) by Municipality of SPS
- "1995-2000 Plan for the Sustainable Development, Strengthening and Decentralization of the Municipality of Nacaome" (Nacaome, Valle) by Municipality of Nacaome

- "Honduras / Germany Corporation for Food Security" (3 municipalities in Lempira, Erandique, Santa Cruz, and San Andres) by COHASA-II

3) Specific Projects: projects focused on health

Category A:

- "Food Program" and "School Feeding" (in poverty area) by CARE: food donation
- "ALA 8620" (F. Morazan, Paraiso) by MSP: basic sanitation
- "Vegetable Garden" (areas with high malnutrition) by MSP and SEP: promotion of family and school vegetable gardening

Category B:

- "Bonus Program" (in poverty area) by PRAF: providing bonus to people under the poverty level
- "Child Feeding" (areas with high malnutrition) by MSP: meal service for malnourished children

Category C:

- "UPS de Colinas" (San Miguel de Lajas, Santa Barbara, and other 47 municipalities) by MSP: improvement of nutritional state of children under five years old
- "Child Monitoring" (areas with scarce health services) by MSP: discover under-developed children in their early stage
- "Community Hospital" (La Esperanza, Intibucá) by MSP: reflection of community opinions to the management of the hospital
- "FHIS 2" (areas with poor basic infrastructure) by FHIS 2: improvement of basic infrastructure

(3) Illiteracy/education

Honduras still suffers from an important deficit in education: 30% of the population are illiterate, with a higher figure of 42% in the rural areas. The average duration of schooling is only 3.9 years. 60% of the economically active population have less than three years of school, 15% has reached secondary education and only 3% has some level of university education.

The education system includes three levels: basic, secondary and superior. The Ministry for Public Education is the major provider for the basic education system, including preschool level, primary education, adult education and popular cultural education. Primary education is mandatory and tuition-free. The registration coverage for 1992 was above 85%, though

the rate of increase over the last decade has been very slow and is unlikely to allow the achievement of the 1995 target of 90%.

Repetition (i.e., the proportion of pupils who have to repeat the grade) and drop-out (i.e., the proportion of pupils who quit school each year), especially in the rural areas, still constitute a major problem for the achievement of primary education objectives, as shown in the following table:

Repetition and drop-out indices

	<i>1988</i>	<i>1992</i>	<i>1995 (target)</i>
Repetition index	15.0%	11.4%	10.0%
Drop-out index	4.5%	3.3%	2.0%

Due to these indices, the final efficiency of the school system is still low, especially in rural areas where only 136 from 1,000 matriculated students in 1984 finished their primary schooling in six years, 177 finished it in seven to nine years and 687 did not finish primary school. Corresponding figures for the urban areas are 360, 359 and 281 respectively. The assignation by PRAF of a monthly coupon to mothers head of household whose children are matriculated in primary school could contribute to improve these figures (an impact evaluation has been conducted last year; results pending)

Secondary education includes mid-level education (one three-year basic cycle and one 2-3 years diversified cycle) and technical education; its responsibility is shared by the public and private sector. Matriculation coverage for secondary education, which has stagnated around 20% for the last decade, registered a significant increase to 39% in 1992, due to the opening of 100 new colleges and several new tracks, corresponding to the job market demand, thus leading the way to the 1995 target of 42%. Those tracks include computation, marketing, hotel management and tourism, health and nutrition, electricity, electronics, etc.. The final efficiency of secondary education (i.e., the proportion of students finishing within the required time) has been estimated at 32% for students matriculated in 1984.

Higher education includes the university sector, dominated by the National Autonomous University of Honduras and the National Pedagogic University (94%), with a small participation of 5 private universities, and the non-university sector (Forestry School, Military Academy, Seminar). Matriculation coverage for 1990 was 6.4% of the population over 17 years.

Adult education includes three programs: accelerated primary schooling, functional education, centers for popular culture, all tending to provide basic learning skills. These programs covered an average of 3,300 people between 1990 and 1992; at this date, they were supplemented by other programs, reaching a total coverage of 13,300, of which 69,000 corresponded to an interactive radio program.

The problems identified for the educational sector includes:

- Low coverage of preschool, secondary and higher education, the first allowing the children to obtain a greater benefit from primary education, the last two opening opportunities for more rewarding jobs. In that respect, a main obstacle is the high price of private schools for the majority of the population.
- Lack of primary school teachers: in 1992, 42% of the country's schools had only one teacher for all grades and administrative matters, with negative impact on the quality of education.
- Centralized, inefficient structure which impedes proper management of resources, lack of coordination between levels.
- From the teachers' point of view, lack of opportunities for career and merit-based promotion, decrease of social status and low levels of real salary (50% decrease in the last 10 years), leading to the need to look for an additional source of income.
- Financing of education: even though the education budget represented in 1992 54% of the state's social expenditures, 97% of this were spent in salaries and current operating cost, leaving only 3% for investment. However, this sector of activities has been supplemented since 1990 by the social compensation programs (construction and repair of schools by FHIS). In addition, there is a fundamental inequity in the spending of public education funds, which attributes 6% of the national budget to the UNAH and thus favors higher level education by subsidizing university matriculation and fees, mainly for those who could afford to complete secondary education. This inequitable pattern is shown in the following table for the 1993 budget:

Inequitable distribution pattern of the 1993 budget

<i>Level</i>	<i>Matriculation</i>	<i>Budget</i>
Primary	80%	58%
Secondary	17%	22%
University	3%	20%

Moreover, the attributions of a fixed budget share to the university without taking results into accounts and the low level of personal investment by the students are factors for low quality of this institution.

(4) Demographic structure and dynamics

1) Population characteristics

Based upon the 1974 and 1988 Household Census data, Honduran population for 1993 was estimated at 5,173,141, with a 2.8% growth rate, which implies a population doubling time of 26 years.

The reasons for the still high natural growth rate are a decrease in mortality combined with a persistently high fertility. Total fertility rate (TFR) has decreased from 7 children per women in the 70s to 5.2 in the 1991/92 ENESF. However, this decrease in fertility rates has not resulted in a corresponding decrease in crude birth rate, due to the arrival in the child bearing age cohort of young women who are the products of past higher fertility rates. In addition, age- and stratum-specific rates show that fertility has decreased mainly in women over 25 years old, with basically no changes in the under 25 age group over the last five years; rural women, on average, have 3 more children than their counterparts from Tegucigalpa and San Pedro Sula.

The crude mortality rate went down from 13.6 in the 1970-75 period to 6.4 in 1993, reflected in an increase in life expectancy from 54 to 67 years. Decrease in crude death rates are partly explained by the substantial decrease in infant mortality rates, from 109 to less than 50 per 1,000 live births in the period 1970-90.

As a result of the decrease in mortality and slow reduction in fertility, 46% of the Honduran population were under 15 years of age in 1998. Finally, migration rates were stabilized in the 90s with the return of refugees from El Salvador and Nicaragua to their respective country.

Over the NMHP's time frame, the number of population under 15 years will slowly increase from 2.4 to 2.7 millions, while the number of persons aged 65 and more will nearly double, from 184,000 to 303,000, eventually reaching 1,171,000 (i.e. nearly 15% of the population) in 2050. The number of young women will still increase from 563,000 to 789,000, thus leading to continuous high birth rates if TFR is not decreased (see Figure 4-5).

In 1988, 41.7% of the population were urban, with a 4.9% growth rate for the 1974-1988 period. The household survey showed that 57% of the household head in large cities had their roots in another place; the corresponding figures for the small cities and the rural areas were 43% and 24%. Due to this ongoing phenomenon of urban migration, the departments of Cortés (with the main city of San Pedro Sula) and F. Morazán (with the capital Tegucigalpa) increased their population by 70 and 77% respectively. Deterioration in urban coverage rates for water and sanitation infrastructure has increased the difficulties to attend the basic needs of this new urban population, mainly located in unplanned settlements.

Departments included in the study's zone C have registered the highest increase of population and, based upon the 1988 Census data, are expected to grow by 15% of their present population until 2010. The development of "maquilas" in the department of Cortés explains a higher than usual female-to-male ratio. Zones B and F will have almost stable populations, with immigration in Colón compensating for small decreases in other departments. Zones A, E and especially D (Valle) will continue to experience rural to urban migration on a large scale.

2) Family Planning activities and population policies

The contraceptive prevalence rate for women in union has been steadily growing from 26% in 1981 to 46% in 1991/92, with higher rates in urban areas, especially in the two main cities. The most widely used method is surgical female sterilization (15.6%). A recent disturbing trend shows, during the period 1987-1992 a decrease in use of oral contraceptive from 13.4 to 10.1% and a corresponding increase in use of less effective natural methods (from 7.4 to 11.7%).

The sources of modern contraceptive methods are diverse: the MSP accounts for 30% of the supply, the IHSS for 7.9% and the private, USAID-funded ASHONPLAFA, working through several clinics and a network of community-based distributors, for 24.2%, while the other private medical sector provides 20.7% and the pharmacies and retail stores 14.8%. Most sterilization is performed by the IHSS and ASHONPLAFA. Contraceptive supplies for public sector and for ASHONPLAFA distribution points are provided by USAID. The unmet demand for contraceptive use among women in union is estimated at 13%.

The official population policy states the right of the couple to freely decide the number and timing of their children, and that they should be provided with the needed information and services to do so. Abortion is illegal although it is practiced in Honduras.

Following the diffusion of the results from the 1990 Maternal Mortality Survey, a greater consciousness developed among health professionals that family planning was indeed the main short/medium term strategy available to decrease high-risk pregnancies and thus decrease the high rates of maternal mortality. A number of reproductive health activities, based upon the expected impact of family planning on mother and child health, were launched. Yet, full-scale political support for family planning activities is not forthcoming, for fear of political backlash originated by the "pro-life" sector of the Honduran society, such as the recent reaction to USAID's presentation of demographic projections, which defined the accompanying policies suggestions as "demographic terrorism".

However, it should be noted that, at the grassroots level, religious factors are not a major reason mentioned for not using family planning methods, as assessed by the ENESF and by qualitative investigations on reproductive risk. More commonly indicated are the negative attitudes of the woman's companion, the motivation and attitude of the health/FP provider and the access to/consistent availability of FP methods.

In summary, the demographic challenges can be stated as follows:

- Persistently high population growth rate by regional and global standards is still worrying, as it makes difficult an increase in per capita GDP, especially in adverse economic conditions and raises particular doubts about prospects for food security.
- Increase in life expectancy, due to steady fall in mortality rates, will bring an increase in the proportion of elderly people, thus modifying the epidemiological profile (more chronic degenerative diseases), increasing the burden on pension systems and on the economically active population.
- Continuing rural-urban migration, in the absence of strict urban planning, will increase the proportion of marginal areas in large/medium cities and increase the burden on health services in these areas.
- Unless (probably expensive) rural development plans are implemented in deprived rural areas, the outgoing migration will continue and the remaining rural population will be dispersed making access to health services more difficult.

- There is an unsatisfied demand for family planning which needs to overcome organization and motivation obstacles within the institutions and deep cultural patterns in the population. In particular, there is a need to work more closely with men.

(5) Health related education

1) MSP activities

Health education activities in the MSP are directed by the Health Education Division, which includes both medical and communication technical staff and disposes of audio-visual equipment for preparation of education material. Subject contents are prepared in coordination with the appropriate technical unit, which also review the materials prepared. Those materials include radio or TV adds, flip charts, posters and pamphlets. Printed material is mass reproduced by outside contractors and radio/TV message broadcast is contracted to national or local channels according to the communication plan.

Regional health teams have a human resource development/ communication person in charge of distributing printed education material to the health facilities and training personnel, usually professional or auxiliary nurses and promoters, about its use (both in content and methodology). Posters are set up on the walls of clinics and waiting rooms, and used, along with flip charts, as support for education sessions previous to opening of the clinics. Printed material is available for reading within the facility, at least for those who can read (though sometimes a reader can share his/her knowledge with other patients).

Health education on specific topics, especially appropriate use of prescribed treatment, may be completed by the nurse or the physician during the consultation, but this modality is strongly limited by the short time available for each patient, at least in CESAMOs and hospital outpatient departments. Community-based personnel are also trained by health facility staff on the use of graphic material.

Alternatives communication methods, such as puppet theater, dramas, home-made cardboard television, have been used at times through local initiatives.

A lot of the Health Education Division's efforts in the last few years have been dedicated to the implantation of ORT and the prevention of diarrhea diseases through safe water supply and sanitation, the latter as a result of the cholera outbreak of 1991. The decrease in infant mortality observed in Honduras is partially credited to the decade-long efforts to introduce

ORS as the appropriate way to prevent diarrhea-induced dehydration and death in children. Other topics addressed are the promotion of breastfeeding and adequate child feeding patterns, the management of ARI and recognition of severe pneumonia and the prevention/management of reproductive risk. It should be noted, however, that the development of elaborate communication plans, with participation of all concerned divisions, is prone to considerably lengthen the delays between conceptualization and actual diffusion of the plan's messages.

The evaluation of communication impact has been conducted through analysis of cross-sectional survey data (ENESF, specific base-line and final nutrition survey) and through intermittent monitoring of radio/TV channels. Local level evaluation, beyond the experience derived from material validation, has not been systematized up to now. Results from the household survey show the high prevalence of ownership of radio set (up to 69% in rural areas) whereas TV sets are confined to the urban area.

Ownership of radio and TV set by city scale

<i>1995 Household Survey</i>	<i>Large cities</i>	<i>Small cities</i>	<i>Rural</i>
Ownership radio set	92%	87%	69%
Ownership TV set	88%	68%	18%

2) Other sources

In addition to the material previously mentioned, the IHSS has developed a series of videotape education material, mainly on reproductive risk and maternal health concepts, to show in the institution's clinics and hospitals waiting room.

ASHONPLAFA has also its own printed material, the contents of which has been reviewed with MSP technical staff for consistency. NGOs either use the MSP or ASHONPLAFA material or an adapted version of the same, more rarely producing their own.

There are a small number of health-related national radio or TV emissions, with a daily or weekly periodicity: the show host is either a physician or invites a knowledgeable person on the day's topic. MSP and IHSS personnel are frequently invited and thus offered an opportunity to diffuse their institutions' policies and guidelines. Breastfeeding promotion, in particular, has benefited from a strong and frequent presence on the air, though the results have not been positively established as of now.

3) Intersectoral activities

Though health related subjects have been incorporated into most school curricula, its actual implementation used to be left to the teacher's discretion and capacity. Since 1989, an integrated plan was implemented to provide school teachers with technical support material (self training modules) and organize methodology/contents training sessions conducted by joint MSP/SEP teams. The plan was first initiated in two regions near Tegucigalpa, then extended to two others. It also included a pre- and post-training KAP survey of teachers, students and parents. More recently, AIDS-related education activities have been initiated as a joint action of both ministries.

4.3.3 Factors related to the delivery of health services

(1) Health policies

The objective of Honduran national health policy is the provision of timely, adequate and affordable health services to the individuals and to the various population groups throughout the country. Through the concept of extension of coverage, which became the national policy in 1973, Honduras has continued to develop strategies to expand the health services.

Municipalities and communities within them have been classified using the concept of satisfied basic needs, as defined by type of housing, crowding, accessibility to and quality of water supply, presence or not of a sewage system, access to primary education and economic dependency ratio.

Access to health services is closely related to the living conditions and unsatisfied basic needs of the population. Indeed, the poorest of the population, the ones living in the worst conditions, are the ones that the extension of coverage should reach. Yet, for a variety of reasons mentioned in other sections of this report, they are not always reached, as equity may sometimes undermine efficacy and efficiency.

The principles of equity (availability of equal services to rich and poor), efficiency (lowering costs), effectiveness (anticipated results are obtained), and social participation have been maintained throughout periods of relatively liberal spending in the social sector, as well as during the more difficult times, linked to the economic structural adjustment.

The "global option" principles prevailing under the latter conditions emphasized three critical orientations: food security, basic water and sanitation, and access to health services.

More recently, another guiding policy of the Honduran government has been the state modernization project and its focus on decentralization, with more responsibilities, and implicitly more means, to be given to the municipal level. In the health sector, this has been interpreted as the need to promote and organize participation of the local community in the identification of their needs and problems and, eventually, in the local administration of the health services (or at least part of them). As part of this commitment, in June 1994, the 293 mayors of Honduras agreed to support the "Plan de Acción Nacional Desarrollo Humano, Infancia y Juventud" and use it as a base to develop their own municipal plans.

Furthermore, a year later, June 1995, the mayors committed themselves to support the "Pacto de la Infancia" whereby municipalities will identify municipal programs, projects and activities directed to children, making this a priority over other pressures.

The decentralization process complements the impact of local programming, an older strategy already implemented by the MSP to improve the response to local needs and better reach the population with low or very low access to health services. Local programming involves bottom-to-top strategies and local intersectoral coordination in problem identification and resource allocation. The process is based on the needs and characteristics of the individual "espacio-poblaciones", i.e., each health service providing unit and its catchment area. Local problems are identified, based on the available human and financial resources priorities are set and activities which can in fact be accomplished are programmed.

Most of the previous policies have recently been consolidated under the Access Process, considered as the fundamental axis of the reform and modernization of the state. This process aims at providing access to health services to the groups that especially suffer the major impact of the economic adjustment program and to improve the ability to monitor their conditions of living. It relies on the development of management abilities of the health services system as the strategy most congruent with current conditions, emphasizing local level development and taking into consideration three main orientations:

- reorganization of the service network,
- retrieval and development of human resources, and
- systematization of social participation in the planning, execution, monitoring of the local networks' health plans.

The set of policies encompassed in this approach are expected to contribute to the solution of some major problems experienced in previous years:

- The balance between equity on the one hand, and efficiency and effectiveness on the other, is a very difficult one. For instance, new health centers have been inaugurated in deprived areas, which in theory do increase access to services; but operational costs for personnel, medicines and maintenance were not available. The health centers thus remained closed to the public.
- A number of obstacles need to be solved before decentralization is actually in effect: a large share of operating budget still remains under central control (especially those items related to personnel and drugs); legal obstacles such as the need for bond deposit prevent regional/ local managers to obtain full responsibilities; large health unions are reluctant to have their members pass under the fragmented control of municipalities.

(2) Laws and regulations

A brief summary of some of the principal laws that regulate health institutions and providers is described below.

1. "Health Code (Código Sanitario)", approved by the National Assembly in August 1991, establishes general guidelines and specific norms related to health and environment protection. In agreement with WHO, it defines health as an integrated state of biologic, psychological, social and environmental well being, an inalienable right of the human being, implying the State's and the citizen's responsibility to care for its promotion, protection, recovery and rehabilitation. The Code regulates the disposition of water, waste materials and excreta; matters of construction, food and drink; occupational health and industrial protection; procedures for registering pharmaceuticals, cosmetics, biological products and the corresponding raw materials; it sets the conditions for closing health related businesses down; the actions to be taken in case of national emergencies and disasters; finally it sets the guidelines for the disposition of cadavers, the control of crematoria and cemeteries. Although the Code establishes the law, it states that specific regulations for implementation of the law and for sanctioning violators have to be developed. Such regulations have not been created in all cases.

- i) "Social Security Law", issued in 1959 as Decree No.140, sets the framework for payments, provision of coverage and quality of services supported by the Social Security. In its present form, the law prevents both the extension of coverage and the increase in the percentage contribution paid by employee and employer enrolled in the San Pedro Sula and Tegucigalpa models. The law, however, makes no mention as to the need for specific requirements, such as unanimity by the Board of Directors or amendments, to change the salary base for payment. In 1961, when salary ceilings were set, only 4.9% of the working population earned incomes higher than Lps. 600. As a result, this was set as the maximum salary. This ceiling bears no relation with current reality where 79.6% of the working population earn more than Lps. 600. Although the IHSS is aware of, and has undertaken studies to show the financial crisis they are confronting and the need to increase the ceilings, opposition from powerful sectors in government, unions and the private sector have prevented the change. As stated above, health fees set under this law, however, do not apply to new contracts subscribed between the Social Security and private firms. In Danli, for example, fees are calculated on a Lps. 1,500 maximum salary. Percentage contributions are also different from what is established by the general law.
- ii) "Statute of the Physician Employed in the Public Sector", adopted in 1987, guides and regulates physicians' work responsibilities, schedules, salaries and behaviors. It establishes merit awards and sanctioning procedures. A draft update of the law and a proposal for automatic salary/bonus increases, based upon increases in the cost of living, and merit awards were elaborated during the last general assembly of the physicians' association.
- iii) "Civil Service Law", govern non-medical employees from MSP, IHSS and University. This law establishes the rights, benefits and dismissal procedures of the non-medical employees.
- iv) "Ley de la Familia", awaiting consideration by Congress, highlights the rights of women and children and sets conditions to protect them.
- v) "Ley de Población y Política Migratoria", approved in 1970, indicates that the Dirección General de Población y Política Migratoria (DGPPM) is the institution responsible for establishing and promoting appropriate measures to deal with

demographic aspects. As part of the above mentioned law, the Population Advisory Council ("Consejo Consultivo de Población"), became, in 1994, the institution empowered to prepare pre-projects related to population and to propose measures related to demographic policy in general. Amongst its priorities are: the search for a national population legislation and policy that would contribute to the modification of the demographic variables with the goal of improving living conditions and the development and implementation of a Human Settlements Statute which would regulate, within the context of the municipalities, the geographic areas that are defined for habitation.

- vi) "Ley de Municipalidades", issued in November 1990 to repeal the outdated 1927 law, establishes the autonomy of the municipalities, within the context of the principles of state modernization and decentralization. It details the structure, composition, obligations and responsibilities of the municipalities. It empowers the municipality to levy taxes and to collect funds from services and sales, fines, donations and inheritances. Furthermore, the law establishes that the central government will transfer to municipalities 5% of the Republic's income, starting with a 2% contribution in 1992, 4% in 1994 and 5% thereafter. To date, however, municipalities have received, at most, transfers of 2.5%. Funds were to be provided to the municipalities at the end of each quarter. The law orders the creation of a Municipal Development Institute destined to promote integrated municipal development. The principal objective of the institute is training municipal official and employees, provision of technical assistance, promotion of international cooperation and coordination of national institutions to provide support to the municipalities.
- vii) "Acuerdo No. 008-95 from the Presidency of the Republic" creates the Special Health Commission (CESAL) whose mission it is to execute the legal procedures related to the purchase of medicines and medical supplies, in the national or international market, which might be required by MSP, for a cost of over Lps. 100,000.
- viii) "Acuerdo No. 2563 from the Ministry of Public Health", issued July 1, 1995, authorizes the creation of the Special Ministry of Public Health Procurement Office, responsible for procuring good and services required by the Ministry of Public

Health. The agreement establishes the structure of the special office, and commands it to prepare a manual of norms and procedures to be approved by MSP.

The current problems in this area are as follows:

- i) Although health related laws already exist or have been drafted, their actual implementation is hampered by lack of specific regulations and controls by the corresponding government institutions. Response to emergency demands overrule established processes.
- ii) Although the Social Security Law permits "breaking" the Lps. 600 salary ceiling, technicalities and some opposition from employers, unions and the establishment have not resulted in changes on a ceiling set more than 30 years ago.
- iii) Although the law establishes processes, it is very difficult to implement them. For example: civil servants may be fired following procedures established by the law. In reality, firing a civil servant is almost impossible. A ministerial decree promotes breast feeding in the workplace, however, it is difficult for new mothers to carry out this activity at the workplace. Procedures exist to procure drugs, but frequently emergency purchases must be made. Finally, the municipality law establishes the transfer of funds to the municipalities, but in reality, due to a limited national budget and to opposition of the decentralization process at some levels, full transfers have not been made.
- iv) Drug procurement still requires improvements. Despite the creation of the Special Health Commission and the Special Procurement Office, differences in interpretation of the articles of the Agreements which created these two units slow down the acquisition process.

(3) Institutions and organization of the health sector

"The Ministry of Public Health (MSP)" is the institution responsible for setting national health policy and is the principal institution that provides health care services throughout the country, particularly to the poor and middle-class population and to those in the rural areas, through an extensive facilities network, from national hospitals to rural health centers. This network is supplemented by outreach workers and community volunteers. Its coverage is estimated at 60-65% of the population (see Figure 4-6).

"The Honduran Social Security Institute (IHSS)" offers health services for illnesses and maternity to affiliated workers and their dependents in Tegucigalpa and San Pedro Sula where the IHSS hospitals and clinics are located. In addition, special schemes have been developed with the MSP or private providers whereby certain types of services are offered to affiliates in a few other cities. The IHSS present coverage is estimated at 20% of total population.

"The Armed Forces" have their own hospital, but the non-military population may receive services provided they pay for them. There is only one major institution using an HMO-type pre-payment system (SANITAS) and a few insurance companies offering reimbursement of pre-defined packages of medical costs.

The private for-profit sector provides in and out patient services, but is mainly concentrated in large cities, and specialists provide most of the services. A number of NGOs offer comprehensive or partial health services; some of them have a policy of reaching areas or sectors not covered by other providers; others work in coordination with MSP facilities. The extent of private sector coverage is not well known except for specific activities covered by national epidemiological surveys. For example, information is available on acquisition of contraceptives in the private sector. It should be recognized that private drugstores play an important role, not only as dispensers, but also as medical advisers and primary prescribers of drugs.

Traditional healers are still active, especially in the rural areas of the country. Traditional birth attendants, responsible for one third of the deliveries, whether or not reporting to the MSP's network of services, play an important role as health providers.

"The Servicio Nacional de Acueductos y Alcantarillado (SANAA)" is a public autonomous institution created in April 1961 with the objective of promoting the development of public water sources and sewage. The principal mandates of SANAA include the study, construction, operation, maintenance and administration of the water and sewage services that belong to the Central District, municipalities, Water Boards or Development Boards. SANAA and the MSP Division of Environmental Health are the two institutions responsible for programming and carrying out water and sanitation activities in the country.

"El Fondo Hondureño de Inversion Social (FHIS)" was created in February 1990 as part of the social compensation package to ameliorate the impact of economic adjustment. It is

established as a decentralized entity and is not subject to the State procurement, contracting and civil service laws; thus it is an effective and quick mechanism for hiring, constructing and procuring goods and services. The FHIS has implemented projects relating to refurbishing, constructing and equipping schools and health centers, drinking water systems, sewage services, latrine construction, provision of supplies and training of traditional birth attendants, and development of household vegetable gardens amongst others.

“The Programa de Asignación Familiar (Program for Family Allowances)” also created in 1990, for social compensation, provides subsidies that facilitate maternal and child access to health services, encourage mothers to send their children to primary school and promote learning productive skills to poor and single mothers.

“El Patronato Nacional de la Infancia (PANI)” is an autonomous institution established to provide physical, mental and social well-being to mothers and small children in accordance with the national economic and social development programs. The National Lottery Program is the primary source of PANI's funds.

The most important problems in this area can be summarized as follows:

- i) There is insufficient coordination amongst institutions working in the health sector, thus resulting in inefficient use of available physical and human resources to solve the existing health problems. The MSP and IHSS duplicate primary health care services; the IHSS provides tertiary care that the MSP also tries to provide.
- ii) Although the MSP is responsible for providing water and sanitation to communities of less than 2,000 inhabitants and SANAA to bigger communities, limited coordination results in misuse of scarce resources and deficient provision of services.
- iii) The MSP is too concerned with the provision of services, yet there are not enough resources for regulation and standard setting, for monitoring and supervision.
- iv) Private for profit sector is mainly located in urban areas and thus has limited coverage. Ambulatory care statistics in 1991/92 indicated a significant shift from private to IHSS or MSP sector amongst the middle class population motivated by the impact of the measures of economic adjustment.
- v) FHIS activities appear to overlap and/or take over the mandates for which other institutions exist. Close coordination is required between FHIS, SANAA and the

Programa Nacional de Servicios de Salud (PRONASSA), the MSP unit responsible for construction and maintenance of health facilities. Currently PRONASSA provides technical assistance and supervision to the health centers constructed by FHIS.

(4) Organization/facility management

As a general rule, health services are organized into four levels of care. Participation in each of the levels varies by institutions:

Health services organized into four levels of care

<i>Level/instit.</i>	<i>MSP</i>	<i>IHSS</i>	<i>NGOs</i>	<i>Private</i>
Community	*		*	*
Institutional				
Primary	*	*	*	*
Secondary	*	*	(*)	*
Tertiary	*	*		*

The MSP's hospitals absorb more than one third of the MSP's budget with a corresponding two thirds of the human resources. In spite of these high proportions, all hospitals have a budget insufficient to meet their needs, especially with regards to acquisition of drugs and medical supplies. Preventive maintenance of equipment is hardly considered in the budget allocation. Rational use of the limited resources through improved management, local programming and evaluation, as a result of the accreditation process which highlights the problems and deficiencies found, is considered as the only way of addressing these problems.

All hospitals, with the exception of the five national hospitals in Tegucigalpa and the Hospital Catarino Rivas in San Pedro Sula, form part of the regional health network. Regional and area hospitals, as well as CESAMOs and CESARes, are faced with problems similar to those mentioned above: deficient management and scarce financial resources.

Management capability at the institutional level is further diminished by the frequent changes of hospital and regional directors when there is a change of government. Doctors responsible for running health centers have been trained to cure patients, not to manage services.

As part of the modernization process, some funds will be decentralized in two health regions. Funds for payment of salaries and wages and up to 90% of funds for purchasing

drugs and medical supplies are amongst the budgetary line items that will still be spent at the central level.

Cost recovery mechanisms, authorized since 1990, allows MSP institutions to collect fees for service and to keep 75% of it in the case of health centers and 90% of it in the case of hospitals. These funds can be spent at the discretion of the unit, according to general guidelines (which do not allow, for instance, salaries and wages and few other items to be paid for with these funds) and have contributed to solving problems related to drug needs, structural maintenance of buildings and vehicle repairs. Community participation in the collection and management of cost recovery funds is observed at the CESAR level, where the local committee supervises the use of the funds.

For reasons of faster implementation, visible job creation and political impact, health-related infrastructure activities, such as the construction or renovation of health centers, were transferred to newly created entities such as the FHIS or the PRAF, under the umbrella of a social compensation package, although design and supervision remain the responsibility of the MSP.

Following is a list of identified current problems:

- i) Rural health centers, especially those where an auxiliary nurse is the only staff present, are frequently closed because the auxiliary nurse is on sick or maternity leave, is performing outreach activities, or is attending a training course.
- ii) Employees' wages are increased due to labor union pressures, but institutional budgets are not increased to meet these recurrent personnel cost increases; as a result, non fixed costs, such as maintenance, supplies, and supervision, suffer.
- iii) Cost recovery policies are not fully implemented and charges have not kept up with inflation. Exemption policies are not always applied properly. There is a need to improve cost recovery incentives.
- iv) Hospital and regional budgets are not decentralized causing difficulty in meeting programmed activities and acquiring services and supplies when needed.
- v) The limited budget and priority assigned to preventive maintenance of equipment, vehicles and infrastructure, and the lack of corresponding items in most donors' projects results in short lives for these assets.

- vi) Few region and hospital directors have administration/management training or experience and have to face strong local political pressures.
- vii) Union pressures and the goal of "health for all" limits the reduction in the MSP's role and the increase in the patient's participation.
- viii) Crisis management and national emergencies prevent achievement of scheduled activities at local and regional level.
- ix) Excessive centralization at the IHSS slows down administrative procedures. Large contributions from the north western affiliates (San Pedro Sula and vicinities) may be subsidizing the entire system.
- x) To date most of the community participation in health facilities activities are related to material, financial and in-kind contributions rather than participation in management and decision making.

(5) Human resources development, training and supervision

In the social sector, for instance health and education, where the emphasis is on direct service to, and contact with, the population, the development of human resources is an essential component of the quality of the services provided to this target population. However, the major part of the health sector operational staff works under very difficult working conditions, which constitutes a serious limiting factor for the implementation of the strategies mentioned in the above sections.

1) Type and number of resources

The MSP currently employs 1,067 physicians, 526 professional nurses, 3,764 auxiliary nurses, 100 dentists and 59 microbiologists. In 1993, the IHSS employed 387 physicians, 120 professional nurses, 600 auxiliary nurses and 19 odontologists. The Physicians Association reports, for 1994, 3,961 active physicians in Honduras, among them 1,409 specialists and 2,552 general practitioners (see Figure 4-7).

(A) Community health workers

The community volunteers play a very important role in organizing the community to identify problems and propose solutions. These volunteers are generally selected by the community and trained and supervised by the MSP or NGO staff (auxiliary nurse or promoter). They are principally responsible for promoting the use of services available at the CESAR or CESAMO, notifying births and deaths, providing oral rehydration salts,

making sure infants and mothers are vaccinated, identifying high risks pregnancies, dehydration and severe acute respiratory infections and referring complicated cases, taking malaria smears and giving treatment. The MSP currently has four categories of volunteers: traditional birth attendant, health "guardian" (basic treatment and education), health representative (water/sanitation) and voluntary collaborator (malaria), whose numbers and actual linkage with the MSP structure has been generally decreasing since the high time of their creation in the 70s. NGOs usually manage their own community personnel: health educators/promoters, water/sanitation technicians, family planning distributors. Other categories of volunteers have appeared recently, most of them linked to NGOs or to specific projects: ORS providers, breast-feeding advisers, growth monitors, managers of community drug funds.

(B) Auxiliary nurses

The auxiliary nurse is the basic institutional resource in the rural areas. He/she has completed six years of basic education and receives one year of training at one of the three main auxiliary nurses training schools in Choluteca, La Ceiba or Tegucigalpa. A few years ago, additional training schools were created on a temporary basis in several other towns, in order to respond to the needs for staffing of new hospitals and to facilitate recruitment of local personnel and thus reduce desertion rate. The auxiliary nurse is the sole provider of health care at the CESAR level. In addition to outpatient clinics, she/he organizes the community, does outreach work, develops the community maternal and children census and supervises and provides support to the community volunteers. In CESAMOs and hospitals, s/he reverts to a more traditional role of assistant to physicians or professional nurses.

(C) Health promoters

The health promoter, assigned either to CESARes, CESAMOs or NGO clinics, is a university graduate with additional training in community development. This health worker is assigned a number of communities where he/she is responsible for providing assistance in organization, community participation, health education, construction of wells and latrines.

(D) Professional nurses

These professionals are trained at Faculty of Medical Sciences of the Universidad Nacional Autónoma de Honduras (UNAH). On average, 50-60 professional nurses are trained per year. Professional nurses received in-service training for MCH preventive and curative care,

but their scarce number implies that most of them are fully dedicated to administration/supervision positions. Also because of their small numbers and some legal limitations, professional nurses do not have strong union representation. Specialty tracks for MCH, adolescent health and family health have recently been created.

(E) Other health technicians

This category includes lab technicians, X-Ray technicians, cytologist, nutritionists, physical therapists, anesthesia technicians, odontologists, microbiologists and others, trained in technical schools under the MSP administration. A new career track of environmental health technician will unify the functions of water & sanitation and vector control technicians.

(F) Physicians

They are also trained at the Faculty of Medical Sciences of the Universidad Nacional Autónoma de Honduras (UNAH). The average promotion includes 150-200 physicians per year. The university training is hospital oriented and provides little linkage to the practices and norms promoted by the MSP and IHSS. Residency program provides post-graduate basic specialties training for physicians in Tegucigalpa; sub-specialty training is obtained from fellowships abroad. Physicians are represented by the Physicians Association of Honduras (Colegio Médico de Honduras, CMH), to which affiliation is mandatory for practice in the country and recognition of professional qualifications. The CMH was the main force behind the elaboration and approval of the Statutes of Physicians employed in the Public Sector ("Estatuto Médico"), which rules their working conditions. It also manages pension and loan funds for its affiliates. A number of physicians work for a public institution (MSP, IHSS) during the morning shift and in a private clinic in the afternoon.

(G) Public health training

A two-year MPH track was created in 1992 in Honduras, under an agreement between MSP and UNAH. It is based upon identification and resolution of local problems and uses job-based training with one of every six weeks in formal classes for its health professional students. 22 persons graduated from the first promotion in 1994, and 26 from the second promotion are now finishing their first year, including 12 from MSP and 8 from UNAH. Up to then, public health training was done through MPH courses in México or Colombia.

2) *In-service training*

A huge amount of training has taken place in the past years within the institutions concerned with health services delivery. Within the MSP, the traditional formula has been a trickle-down scheme from central to regional to area to local level, with its associated risk of loss of information and quality on the way down. In most cases, the training events (courses or workshops) have been decided and planned by the central level technical divisions and been dedicated more to technical than health management matters. Partly for reasons of insufficient staff, the HRD Division has not been able to coordinate nor monitor these training events, and evaluation and follow-up have not been systematic. Another common problem has been the high frequency of training, leading to training being one of the main cause for temporary closure of CESARes, where the auxiliary nurse is the only staff at the facility.

On-site training of MSP personnel during supervision visits is limited by the constraints on the supervision process (see below). Within the framework of continuing education, the medical professional associations also conduct regional and national specialty courses or congresses, with usually a strong emphasis on advances in curative health. A commission from the CMH evaluates the quality of training and the credits acquired through attendance to these courses.

Alternative forms of training have been developed in the recent years, which deserve mention:

- elaboration of self-instruction modules on child survival interventions through the Health Sector II Project and implementation in specific health areas, according to the priority problem in these areas;
 - competency-based training in case management of diarrhea diseases and respiratory infections, with practice in hospitals and large CESAMOs and formal evaluation of the results of the training;
 - direct training of community personnel on contents and methodology for health education in child survival interventions;
- retraining of TBAs on reproductive risk focus through small groups participatory methodology, conducted by participating NGOs under the guidance of MSP;
- distance training course on Management and Prevention of Pesticides Intoxication, with occasional meetings of students with course tutors.

The current policy, supported by a 1994 ministerial resolution, dictates that the regions should elaborate their training program, based upon local needs and look from technical support from the normative divisions and other resources. The training should be oriented to facilitate access to the services in the most deprived zones.

3) Career development and administration

The low level of salaries in the public function, the lack of career development paths, the lack of application of incentives to work in rural areas (in particular for auxiliary and professional nurses) are partly responsible for a rapid turn over in some positions the decrease in matriculations for health professions in the training institutions. Other common problems are the delay in getting the first salary after nomination (up to six months) and the poor payroll management (in case of change of function or workplace). Yet, despite these adverse conditions, it must be emphasized that some of the personnel at all levels have provided a high degree of continuity in the delivery of health services by public institutions. Reasons for this may include the apparent lack of prospects in the private sector due to the global situation of poverty, especially for nurses, for which the prospects in private sector are much lower than for physicians or other technicians and the relative immunity of the technical level of these institutions to political changes.

The inclusion of merit, professional experience and past training in career paths has been considered in a recent proposal by the CMH for reevaluation of the salary scales for physicians, which needs to be evaluated for feasibility. Other careers do not have this flexibility, as they are governed by the Civil Service regulations and do not have strong professional representation.

4) Supervision

Though a direct on-site supervision system for the MSP's four levels (central to region, region to area, area to local, local to community) has been designed within the framework of local programming, its nation-wide implementation is hampered by lack of prioritization, transport problems and emphasis on fault-finding rather than supportive methodology. Ad hoc systems and instruments have been designed at region, program or project level (for instance the MCH Division's supervision to the regions, the POSSEM instruments and system).

Indirect supervision (monthly meetings by geographic area or category of personnel) is an often used, cheaper substitute, especially for supervision of community health workers, but does not provide the opportunity for observation of skills and relationships with the community.

5) Summary of main problems

- i) The working conditions (i.e., salary scales, incentives for working in remote locations or with specific professional health risks) of most public sector health personnel, especially those of non-medical personnel, is woefully inadequate when compared to their experience and level of responsibility and to the current cost of living.
- ii) The ratio of physicians and nurses to population is very low, especially in the rural areas and these areas of highest needs; the nurse/physician ratio is also quite low. Most professionals prefer to stay in the larger cities and/or fill administrative positions and do not provide direct health care services to the population.
- iii) Newly graduated physicians in social service are generally in charge of CESAMOs. Many times they are not knowledgeable of the policies and strategies of the MSP. Their training generally has a strong curative emphasis. The problem is similar for newly graduated professional nurses in charge of supervision at sector or area level.
- iv) In service refresher courses using the trickle-down method for operational staff have not had the expected result on the quality of services.
- v) Among other health professionals, there is a notable lack of laboratory technicians and most of all, maintenance technicians, leading to shorter life of donated material and equipment.
- vi) Supportive supervision is hampered by lack of political support (priority activity), logistics problems. Lack of unified model/system for supervision makes it difficult to organize and maintain training.

(6) *Referral system*

In theory, the public sector's curative health system functions with levels of different resolution capacity for increasingly complex problems. Patient entry can take place at community level, where the voluntary health worker will eventually refer to the nearest health center or hospital, according to the degree of urgency. One step further, the entry

level is at one of the ambulatory primary care facility, CESAR or CESAMO, according to the availability of different types of health centers. For emergency cases, especially after normal daytime opening hours, the patient will go directly to the first level hospital or to the nearest one: in urban areas, regional or national hospitals actually serve as primary emergency facility for their geographical area of influence. In case of medical necessity, patients are referred from the general outpatient clinics to hospital-based specialty clinics, or from first to second or third level hospital. Referrals also occur, although less frequently, from the MSP's hospitals to the IHSS's hospitals for intensive care or to private clinics, upon patient's request. Finally, private clinics also refer to public hospitals, especially for complicated cases needing a more complex array of specialty resources (refer to Table 4-5).

The following table indicates the main motive for referral to the different levels of hospitals:

Main motive for referral to the different levels of hospitals

	<i>National</i>	<i>Regional</i>	<i>Area</i>
Neurology	16.3%		
Cardiovascular	11.0%		
Respiratory	8.7%	12.6%	16.4%
Gastroenterology		14.4%	7.6%
Ob/Gyn	10.3%	31.4%	22.3%
Traumatology		15.3%	10.1%
Psychiatry	10.4%		

The patterns of referral provided in the following tables come from a survey conducted by Dr. K. Ohara in 1993, based upon review of patient records in hospitals and a sample of health centers. The figures refer to patients formally referred and thus should not be interpreted as a distribution of the origin of patients in general.

Referral process: the referring person or institution should fill a referral form indicating the characteristics and origin of the patient, the reasons for referral and the support needed from the upper level. Conversely, the contact person in the reference institution should fill out a counter-reference form, indicating the actual diagnosis of the patient, the procedures performed (surgery, lab or radio tests, prescriptions) and the follow-up to be given to the patient. The latter should take back the form to the referring person or institution.

The problems on referral system are described as follows;

- i) Although the reference form is usually filled out, as it is needed to ensure that the patient is attended at the secondary level, the counter-reference form was found to

have been written in only 15 of 1,072 references sent during a three month period (1.4%).

- ii) Deficient interpersonal relationships between institutional and community personnel and inadequate patient reception patterns often prevent the community health workers from sending patients.
- iii) Stockout of supplies or drugs in a given health center are rapidly known by the client population, who then bypasses its assigned facility; the presence of a physician is also a frequent reason for bypassing CESARes in favor of CESAMOs.
- iv) The absence of separate primary level facilities in the health regions' main cities and in the two main towns (Tegucigalpa and SPS) implies that often this primary care roles is taken over by secondary or tertiary care institutions. For instance, in the Hospital Escuela in Tegucigalpa, only 15.3% of patients had been referred from another level. The corresponding percentage was 4% on average in regional hospitals. The specific problems of the lack of low risk maternity wards and night-time emergency facility in Tegucigalpa and San Pedro Sula, with the subsequent congestion of supposedly tertiary care facilities, is one of the main examples.

(7) Drug supply logistics

Lack of financial resources combined with the rising price of drugs creates severe pressures on supply. Additionally, there is poor utilization of existing resources and supply reflecting weak management procedures and poorly organized and supported secondary distribution.

1) The public sector drug supply situation

(A) The availability of drugs at MSP health institutions

One of the biggest problems facing health care is the chronic shortage of drugs and medical supplies in public health institutions. This problem begins with the procurement process and, consequently, results in insufficiently stocked hospital and regional warehouses and an overall low availability of drugs in the UPSs (CESAMOs/CESARes). Everyone interviewed, including regional directors, warehouse chiefs, hospital directors, hospital pharmacists, doctors, nurses and members of the community, complained about this lack of drugs and supplies in public health institutions.

In the field survey, 30 basic drugs for hospital level and 20 drugs for CESAMOs/ CESARes were selected and stock position of these essential drugs were investigated. Only 23-67 %

of the 30 items were in stock in national hospitals and 33-67 % at regional and area hospitals, 10-75% at CESAMOs and 30-75% in CESARes (see Figure 4-8,9).

Frequency of drugs delivery from warehouse to MSP hospitals is sufficient, however, 82 % of MSP hospitals received less than 70% of what they requested from the warehouse in 1994. 46 % of health centers received less than 70 % of what they requested from the warehouse in 1994. Supply situation varies from institution to institution.

These are reflected in the supply of drugs to patients at public health institutions. Only one third of the patients receives either a portion or all of the medicines prescribed. In those cases, private pharmacies are the most common way to purchase medicines not provided by the original health provider. Among those who have not obtained prescribed medicines, the main reason for not doing that is the high price of medicines.

The chronic drug shortage causes dissatisfaction among health institutional personnel and a loss of trust by the general public. The drug shortage has forced many patients to purchase drugs in private pharmacies and clinics as shown in the survey data. Usually, people do pay for it, however, some people may not be able to purchase expensive private sector drugs.

(B) The availability of drugs at IHSS institutions

Because IHSS drug supply system is similar to the MSP system, the situation in IHSS institutions is also similar. One of the problems is the inability to find companies willing to bid on particular products. In 1995, IHSS did not receive any bids for 72 of the 262 out for tender. As a result, IHSS have to purchase these products locally at a significantly higher price.

2) The drug budget

(A) Trends in the drug budget

The drug budget has amounted to 12-14% of the overall public health budget in the last five years. The public health budget itself has doubled in nominal terms (from Lps. 39,178,000 in 1990 to Lps. 73,566,600 in 1994).

Per capita budget for drugs in nominal term was only Lps. 9.22 in 1990 and increased to Lps. 13.8 in 1994. This was US\$ 1.9 in 1990 and was still US\$ 1.9 (with the January exchange rate) or US\$ 1.7 (with the December exchange rate) in 1994. On the other hand, price of drugs, specially antibiotics, has increased in both international and national markets.

Although the government has made efforts to secure a stronger drug budget within the limited public health budget, high inflation, population growth, rising drug prices and expanded health care coverage has limited the government's ability to purchase enough drugs to meet the nation's needs.

Budget for Drugs 1990 - 1994

Year	1990	1991	1992	1993	1994
Public health (,000 lps.)	336,229.1	379,619.3	454,547.7	511,263.7	683,402.0
(% increase of previous year)		(12.9%)	(19.7%)	(12.5%)	(33.7%)
Drugs (,000 lps)	39,178.0	N.A.	62,691.8	72,594.6	73,566.6
(% increase of previous year)				(15.8%)	(1.3%)
% of Public Health	11.65	N.A.	13.79	14.19	10.76
Drugs per capita (lps.)*	8.3	N.A.	12.5	14	13.8
Drugs per capita (US\$)**	1.9	N.A.	2.3	2.2	1.9/1.7

* Population is based on the number in "Proyecciones de poblacion de Honduras por sexo y edad 1988-2010: anuales 1988-2010 y quinquenales 2015 a 2050", SECPLAN, Sept. 1992

** Foreign currency exchange rate in World Bank Report

Source: Ministerio de Hacienda

(B) Budget proposal and execution

Estimates for the drug budget are based on projections sent by each region and hospital. The MSP budget proposal is sent to the Ministry of Finance and must be approved by the National Congress. After the proposed budget is approved, about 90% of each regional budget and 80% of each hospital budget is sent directly to the MSP, which operates through a central purchasing mechanism. The remainder of each budget is used for direct purchases by each region and hospital. Any budget modification must be approved by the Ministry of Finance. According to available data, the drug allocation for each region and hospital seems to remain unchanged along the process, as there is no significant difference between the distribution of the approved budget for 1994 by region and hospital and the distribution of drugs delivered by the central warehouse to each institution. 96-100% of the modified budgets were executed in 1994.

3) Procurement System

Once a year, each region and hospital prepares a list of the drugs that will be needed the following year. Regional needs are based on the quantities projected by each UPS. These lists are sent to the MSP, whose Pharmacy Division analyzes the technical specifications and consolidates the requirements of each region and hospital in order to prepare the drug budget for the following year. The Financial Division then reviews the estimated costs and compares them with the available MSP funds. Afterwards, the Planning Department reviews and consolidates the requirements into a single proposed budget to be sent to the Finance Ministry.

Approximately 80-90% of drug purchases are made at the central level while the remaining 10% (regions) or 20% (hospitals) are made at the local levels. Under the law, any purchase under Lps. 30,000 may be conducted according to the shopping method, first obtaining at least three estimates from registered suppliers. This is called direct purchase and is to be used only in emergencies, to purchase unprogramed products, or to correct mistakes in the calculation of production goals or data processing. Direct purchase is also used to resolve drug shortages at specific times, mainly those that result from poor planning, short supplies from the central warehouse and distribution problems.

The centralized purchase of drugs is done through a public bidding system, preparation for which begins long before the budget is approved because the procedures for the process are very lengthy. Previously, centralized purchases were made by the National Procurement Office. After this office was eliminated in April 1995, the MSP established its own Special Procurement Division in July to oversee its own purchases.

The process used by the National Procurement Office is a lengthy one. It involves the analysis of the MSP request, the review of the specifications and quantities for the preparation of the bidding documents, the preparation of legal documents, the announcement of bid opening through local publications and embassies, the assessment of submitted bids, the selection of suppliers, the preparation of legal order forms, etc.

4) Programming, storage and distribution

(A) Programming

Drugs have been selected and purchased according to the MSP's National Basic Drug List, which is revised regularly and well known by health professionals.

The Health Sector II Project, funded by USAID, improved the planning process by introducing a local programming system and computerized management at region level. However, the system is not functioning well now. The computers given to the regional warehouses for the program are no longer used or are not fully utilized, due to a lack of maintenance, lost of interest on the part of the regional office or the lack of trained personnel. At the CESAMO/CESAR level, supervision and monitoring by the regional office is critical.

The major problem facing the programming system is the reliability level of the estimates. Programming should be based on population and patient flow and epidemiological data in order to provide more realistic numbers. The system improvements implemented by the Health Sector II Project is one example of an effective approach to drug management. The most critical issue is the supervision and support of the UPSs by regional and area offices. However, program should also consider the fact that irregular or insufficient supplies affect the moral of health personnel and their interest in maintaining an efficient, yet effort-intensive inventory/request system. The problem of computer maintenance is not limited to this program. The strengthening of the regional computer system should be considered.

(B) Storage and distribution

(i) The central warehouse

The central warehouse is responsible for distribution of drugs to regional warehouses and all MSP hospitals. Its inventory system is quite well organized, but is handled manually. Once a week, data on the arrival of new products is entered into a computer. The program of drug stock control must be restructured or a simpler program must be introduced.

The central warehouse delivers drugs to the regions and hospitals every three months. Although there are some delays, the system is generally functioning. The problem is that the warehouse is unable to provide all of the drugs requested by the regions and hospitals on time. This is due to delays in deliveries from suppliers and an overall lack of stock. In

addition to the scheduled quarterly deliveries, the central warehouse must also deliver—or the regions and hospitals must come to pick up—additional drugs whenever they are needed or available. According to the director of the central warehouse, the loss of drugs due to expiration was very rare last year.

(II) The regional warehouses

The regional office is responsible for the distribution of drugs from the regional warehouse to each health center. Although they manage to deliver the drugs, they usually lack sufficient transportation and must often rely on local transportation or people who come to the office for other matters.

An examination of request and supply forms in the regional warehouses showed that the warehouses sometimes delivered more drugs than were requested. This overstock shows a lack of training in stock management and control. Health center personnel also mentioned oversupplies from regional warehouses.

(III) CESAR/CESAMO level

The inventory system in CESAR/CESAMO level is very organized. It includes separate dispensary (or at least a space) and storage rooms (or at least shelves); drugs are stored on shelves according to their label codes and inventory cards are recorded. Monitoring and supervision system should be strengthened to maintain this system.

5) Use of Drugs

Although there is no large scale study on use of drugs, a recent study which analyzed prescribing practices for the treatment of diarrhea in the Metropolitan Region demonstrates that irrational use of drugs is frequent in health services delivery institutions as well as in private pharmacies; out of the 424 cases diagnosed with acute diarrhea in UPS and hospitals, 77% were treated by ORS; however, 42% were treated by antibiotics, 15% by anthelmintics, 36% by antiprotozoals, and 20% by vitamins and minerals.

Frequent irrational prescriptions are wasting limited resources and promoting the use of expensive drugs. Pharmacists do not have the authority to replace a prescribed medicine with a less expensive generic drug. Hospitals should have an active therapeutic committee to discuss and control the irrational use of drugs. Doctors are not always cooperative and existing committees are not active.

(8) Facilities and equipment

1) Overall situation

Insufficient maintenance conditions of medical facilities/ equipment is a common problem in Honduras. The MSP has recognized this situation to some extent by drawing up an improvement plan. However, this plan was never carried out. A sub-regional project has been implemented with assistance of WHO since 1994. However, limited financial and human resources of MSP, lack of information and training, availability of spare parts consumable and technical support are making progress difficult.

While private hospitals can work on a commercial basis with the private sector for service works, such as periodic inspection and maintenance tour on facilities and equipment, the public sector encounters serious problems in this respect, due to the following reasons:

(A) Lack of service network for donated products from foreign aid

Lack of consensus on the standardization of medical equipment is partly responsible for heterogeneous procurement by foreign assistance. This makes the situation worse due to limited availability of spare parts and technical information. Furthermore, a rather small domestic market for medical equipment acts as an obstacle to develop service networks from the private sector.

This causes difficulties for obtaining not only repair services but also spare parts and supplies for proper maintenance and repair works. The situation seems to be worse in the case of Japanese products, due to lack of authorized private agents.

(B) Financial restrictions

The MSP cannot afford the cost of contracts with private sector to maintain their medical equipment, since public facilities, including HISS hospitals and CESAMOs and CESARes cannot allocate sufficient budget for maintenance, rehabilitation or repair works, even taking into account the cost recovery systems.

(C) Institutional definition problem in MSP

Currently, two departments of MSP, CENAMA (or DIM-División de Ingeniería y Mantenimiento) and PRONASSA are involved in facilities maintenance. PRONASSA is responsible for renovation, rehabilitation and expansion of facilities as well as project management and planning while CENAMA is mainly in charge of supervision of

installation works, training, documentation and maintenance/ repair work of facilities and equipment (see Figure 4-10).

However, the above demarcation does not seem to be clear between these two departments, resulting in insufficient coordination and collaboration.

(D) Capability of maintenance staff

Though each public hospital has its own technical staffs for maintenance, personnel needs to be retrained not only for knowledge and skills relevant for repair works but also for preventive maintenance and quality control. Though PRONASSA and CENAMA are supposed to assist MSP hospitals on maintenance, it's difficult for them to support all MSP and other public medical facilities in Honduras with their limited financial and human resources.

The current facility/equipment maintenance systems for public hospitals/ clinics/ health centers are shown below:

The current facility/equipment maintenance systems for public hospitals/clinics/ health centers

<i>Classification</i>	<i>Responsible Organizations</i>	<i>Functions</i>	<i>Personnel</i>	<i>Allocation for Mainte.</i>	<i>Restriction</i>
MSP, Central level	PRONASSA:	Planning & Designing, Renovation, Management of foreign assistance.	Total 40	Though they have own budget for MSP hospitals, amount is too small	Limited coverage area & technical capability
	CENAMA:	Maintenance & Repair, Training, Documentation, S/V for Installation, Technical support	Total 91		
MSP hospitals	Maintenance Dept., each hospital	Daily routine maintenance, Minor repair	CHA: 2-3 National: 20<	<1% of Annual Budget	Technical & Financial capacity
CESAMO/ CESAR, MSP PHC	Maintenance Dept., HR office	Renovation, Minor repair	2-3/office	NIL	Actually, no activity
IHSS hospitals/ clinics	Maintenance Dept., each hospital	Daily routine maintenance, Minor repair	Ex.	<1% of Annual Budget	Technical & Financial capacity
(REF.) Private hospital/ Clinics	Maintenance Dept., each hospital	Daily routine maintenance, Minor repair with joint use of private sectors on contract basis	Qualified technical staff, etc.	3-4% of operation cost	

2) Current situation of facilities and equipment

Conditions of medical facilities and equipment have been studied by analyzing data collected through the facility survey:

(A) Hospitals

(I) Water supply

- service water from SANAA or municipal network 90%
- well 45%
- others, river, creek, etc. 5%

Usually, water is treated by chlorinating for drinking, cooking and medical use as well as boiling and filtration.

(II) Drainage

- connection to sewerage system 74%
- septic tank 24%
- disposal into river, creek 7%

should be improved urgently

(III) Trash disposal

Incineration, burning on the ground, sanitary landfill and municipal collection are the trash disposal methods. There are cases where various kinds of trash are burned directly on the ground, thus without fuel savings linked to use of incinerators.

(IV) Buildings

General conditions of MSP hospitals buildings are relatively worse than those of private hospitals. This is due to the design of the facilities and budgetary problem for maintenance and cleaning. Basically, if enough construction area is available, and especially in the case of area hospitals in rural areas, single story buildings with natural ventilation and lighting system are suitable from the view points of reduction of recurrent cost and easy maintenance.

(V) Electricity supply

Approximately 80% of hospitals suffered from electric power failure in the last 3 months before the survey. Among these incidents, 80% of cases lasted less than 10 hours. In the

case of MSP major hospitals, serious power failure is basically avoided by preferential supply from the electricity company.

Although 93% of hospitals have emergency generator, only 43% of these have automatic starting devices. Furthermore, there are some additional problems, such as insufficient capacity and lacking necessary repair or maintenance works for diesel engine. In the older hospitals, the electric supply cannot meet the increased requirements due to expansion and introduction of new equipment. Emergency generator and circuits should be kept in stand by conditions, in order to secure constant power supply for important sections, such as an intensive care unit and operation rooms.

(VI) Air conditioning and boiler/ hot water supply system

Large scale central air conditioning and boiler/hot water supply system is not common in MSP hospitals, except in third level referral hospitals with multistoried building. Individual air conditioner and small size boiler units are more suitable in order to cope with troubles one by one and reduce recurrent costs.

(VII) Medical Equipment

There is a distinctive difference in the conditions of medical equipment between public hospitals and private hospitals. The proportion of equipment in normal use in each category of facilities is shown below:

Proportion of equipment in normal use

<i>Group</i>	<i>Proportion in normal use</i>
National, MSP	76%
Regional, MSP	83%
CHA, MSP	86%
IHSS	74%
Private Hospitals	95%

- Proportion based upon 162 items of typical equipment at medical facilities, including equipment for diagnosis, surgery, laboratory and office work, examined during the field survey.

One of the main causes of the difference seems to be a budgetary limitation of public hospitals. The MSP and IHSS hospitals can allocate less than 1% of their total budget for facility maintenance work while private hospitals can afford to spend on this item

approximately 3% of their annual operation cost. The comparison, in absolute values, of maintenance budgets shows that private hospitals generally spend a much larger amount than equivalent public hospitals. Therefore, it is difficult for public hospitals to purchase the necessary spare parts and supplies to maintain their equipment in good conditions for full utilization.

The country of origin of the medical equipment varies from hospital to hospital because of different procurement methods. In the case of public hospitals, the larger part of equipment is procured by foreign assistance, while private hospitals select and purchase their equipment on a commercial basis. The current distribution of medical equipment in Honduras by country of origin is as follows (% by type of institution):

Distribution of medical equipment in Honduras by country of origin

	<i>National</i>	<i>Regional</i>	<i>CHA</i>	<i>IHSS</i>	<i>Private</i>	<i>Total</i>
USA.	50	57	56	77	81	62
Japan	10	33	32	16	10	22
France	35	1	-	-	-	1
Others	5	9	12	7	9	15
	100	100	100	100	100	100

Private hospitals mainly use American products that are covered by existing manufacturer's service network in Honduras. This contributes to full utilization of the equipment without any major problems. However, some European and most of Japanese products used at public hospitals do not receive regular maintenance due to lack of domestic service network and budget limitations. Though the closest representative office of Japanese products is located in Guatemala, it's not practical for the MSP, nor for each hospital to place an international order for parts and/or supplies due to complicated procedures for procurement and financial difficulties. Generally, advanced equipment, such as CT scanner and MRI are more common among private hospitals because of the above circumstances.

(B) CESAMOs/CESARes

(i) Water supply

- service water from SANAA or municipal network 67%
- well 5%
- river, creek 13%
- tank/cistern 15%

Usually, water is treated by chlorinating for drinking, cooking and medical use as well as boiling and filtration.

(II) Drainage

- connection to sewerage system 89%
- septic tank 8%

(III) Trash disposal

Burning on the ground, sanitary landfill and municipal collection are used for trash disposal. In some cases, dangerous medical supplies including used syringes are burned on the nearby ground without proper countermeasures to prevent misuse.

(IV) Buildings

Proper maintenance of buildings is a common problem for CESAMOs/CESARes, since MSP cannot afford to renovate any existing facilities due to financial difficulties. Consequently, assistance from foreign donors, municipalities, communities and private sector is the only way to solve the problem.

(V) Electricity supply

Approximately 80% of the CESAMOs and 60% of the CESARes have electric supply system. Among these facilities, only 10% of CESAMOs have an emergency portable generator. Therefore, kerosene refrigerators are used for maintenance of the cold chain.

(VI) Medical Equipment

Because of the PHC function of CESAMOs and CESARes, they have only basic instruments and apparatus for diagnosis and treatment, although some CESAMOs support a laboratory with equipment for blood testing and other biomedical examinations. Additional equipment such as obstetric examining beds, nebulizers, electric stoves, sterilizers, etc. was obtained by external aid. However, the difficulties for maintenance are the same as for MSP hospitals.

(9) Health financing

All systems operate with inadequate resources reflecting budgetary deficiencies and institutional limitations. For MSP, resource limits are worsened by severe cash flow problems related in part to the inclusion of SANAA funds in the MSP budget and in part to

the difficulties associated with centralized resource management. In a relative sense, however, public health has been supported consistently in the public budget. Over the past decade, MSP has received between 9% and 10% of national central government funds which, in turn, represent one quarter of GDP. As a result, Honduras has spent approximately 2.5% of GDP on public health services. Significant increases in this share would not be expected during the life of the NMHP (refer to Table 4-6).

On a per capita basis, the MSP budget has been increasing. In 1995, the MSP budget represented 128.33 Lps for each Honduran. This compares with a per capita amount of Lps. 70.9 in 1990. Although still small, user fees represent a growing source of revenue for the MSP, increasing from Lps. 1.18 to 2.49 over the same period. The importance of user fees varies considerably among institutions. Overall, user fees represented 3.32% of total budget for MSP hospitals in 1995. Although national hospitals generated the most revenues, user fees represented only 2.83% of their budgets as compared to 3.52% and 4.95% for regional and area hospitals respectively (refer to Table 4-7).

In more individual terms, 5% of the individuals in the household survey used hospital services in the period covered by the survey. Approximately one-third of these hospitalizations were for delivery and over 70% were provided in public hospitals. 93.7% of these patients paid the institution a direct fee for services averaging Lps. 86 for those who paid. In almost all cases, if the institution had the supplies, they were provided without additional charges. However, almost 20% of the patients purchased drugs outside of the institution at an average cost of Lps. 37. For ambulatory services in both public hospitals and clinics, most patients in the sample paid a small amount, Lps. 3-4, but here, too, 15-22% of the patients purchased drugs outside of the public sector.

The Honduran Social Security program (IHSS) covers approximately 20% of the population, concentrated primarily in the Tegucigalpa and San Pedro Sula areas. In these areas, IHSS has over one million beneficiaries which represents more than 50% of the population. Covered services are provided directly by IHSS facilities. The system is financed by a tax on wages up to the level of Lps. 600 per month. This limit has remained unchanged since the establishment of the program over 25 years ago when it represented 10 times the official minimum salary. Although originally covering all of the wages of over 90% of the covered employees, it currently covers the wages of fewer than 20% and represents less than the current minimum salary. Failure to modify the financing of IHSS

has limited greatly the ability of the system to meet its original objectives of providing more comprehensive services to a growing proportion of Hondurans (refer to Table 4-8).

In fact, the actual benefits are limited so that IHSS beneficiaries receive at least some services from the MSP and, as well, from private providers. This is demonstrated by the experience of the household survey sample for Tegucigalpa/San Pedro Sula. Although "covering" over half of the population, IHSS provided only 30.5% of the hospitalizations, 21% of the curative care ambulatory visits, and only 17% of the preventive service visits.

Distribution of Visits by Provider in Household Survey Population

<i>Visit Type</i>	<i>Location</i>	<i>MSP</i>	<i>IHSS</i>	<i>Private</i>
Hospital	Tegu/SPS	56.7	30.5	12.9
	All	71.0	15.7	13.3
Curative	Tegu/SPS	23.2	21.0	55.7
	All	47.1	7.8	45.1
Preventive	Tegu/SPS	51.6	17.0	31.3
	All	65.1	7.9	27.0

Outside of the Tegucigalpa/San Pedro Sula area, IHSS does not provide services directly. Rather, it acts as an insurer and contracts with public or private providers to deliver services to beneficiaries. This activity has been expanded in recent years and is likely to be the source of IHSS growth in the future. In these settings, IHSS contracts typically call for premiums to be paid on a higher level of salary and represent a significant difference in both the financing and the service provision activities of IHSS.

Although the private sector role in service provision is not well documented, their role in service provision is important. In the Tegucigalpa/SPS area, over half of the curative care visits were obtained from private providers. For the sample as a whole, over 45% of the curative care visits were to private providers, a share only slightly less than that for the public providers (47%). Even for preventive services, the private provider was an important source accounting for 27% of all such visits. For hospitalization, the role of the private provider is less important with only 13.3% of the hospitalizations coming from that source. However, that share is only slightly lower than the IHSS share of 15.7%.

In general, the trend is to increase the role of the user as a source of financing for the health sector, either through increased cost-recovery in the public sector or increased insurance

through IHSS and other insurers. The implications of these trends for the long run financing of health services is incorporated into the NMIIP presented later in this document.

(10) Health service delivery: coverage and access to services

1) Service production

(A) Inpatient services

Overall, Honduras had in 1993 an installed capacity of 6,105 beds (Hospital Directory), which accounted for a density of 118 beds per 100,000 persons. This number has decreased over recent years, from 200 in 1964, mostly because of an increase in population and an increase in bed utilization. The recent construction of a series of area-level hospital has just allowed to keep up with the increasing demand. Whereas the density of hospital beds is highly dependent upon the country's economic level and type of health system (with usually more beds per population in richer countries, on one hand, and in state welfare oriented countries on the other), the figure for Honduras is still in the lower part of a range of values across countries in Latin America.

Density of hospital beds in Latin America

<i>Country</i>	<i>Hospital beds /1,000 pers.</i>	<i>Country</i>	<i>Hospital beds /1,000 pers.</i>
Honduras	1.2	Mexico	0.7
Costa Rica	2.6	Brazil	3.5
El Salvador	1.5	Andean countries	1.7
Guatemala	1.6	Latin America	2.5
Nicaragua	1.4	USA	4.4
Panama	3.2	Canada	6.8
Central America	1.7		

Source: Health conditions in the Americas, 1990. Data are from 1987.

However, given the concentration of hospitals in urban areas, especially in Tegucigalpa, densities vary from 397 in the Central District Municipality to between 30 and 141 in the other health areas (see Figure 4-11). Still 14 of 39 health areas do not have their own hospital.

In 1993, 66% of the hospital beds were in the public MSP sector, 11% with the IHSS and 23% in the private sector, an average distribution characteristic of a rather welfare-oriented, state-sponsored system. The MSP's network includes 6 national hospitals (including 2 psychiatric hospitals), 7 regional hospitals and 14 area hospitals; the IHSS counts with two

hospitals in Tegucigalpa and 1 in San Pedro Sula; the figures for the private sector are based upon the 56 institutions listed in the Hospital Directory published by the Hospital Division from the MSP. Among the MSP facilities, 25% of the beds were in Pediatrics, 23% in Medicine, 18% in Surgery and 16% in OB/Gyn.

The MSP hospitals accounted in 1993 for 197,300 discharges, i.e. 47.8 discharges/bed, with an average occupancy duration of 5.4 days per bed and a 73% occupancy rate. Reported to the target population, the MSP provided 3.8 hospitalizations per year for every 100 person. Again, these figures can be compared to those of neighboring countries, showing an acceptable pattern of utilization ratio of the available hospital beds:

Utilization ratio of the available hospital beds

Country	Year	Discharges /100 p.	Country	Year	Discharges /100 p.
Honduras	1988	3.1	Nicaragua	1987	6.3
Honduras	1993	3.8	Mexico	1986	3.6
Costa Rica	1987	11.2	Columbia	1988	6.2
El Salvador	1986	4.0	Chile	1987	10.5
Guatemala	1987	2.6	USA	1986	0.8

Source: Health conditions in the Americas, 1990.

Using similar rates for the IHSS and the private sector, the average number of hospitalizations per year per 100 persons would be 5.4; a similar figure has been found during a recent household survey in neighboring Nicaragua. Among the factors explaining the high level of use of existing hospital beds is the hospitalization for delivery: in 1990, 41% of the 185,000 deliveries were institutional, with a usually very short duration of stay, especially in public hospital, where discharge 8 to 10 hours after delivery can be the norm. Indeed, some maternity wards have occupancy rates higher than 100%, as the demand, especially in large cities, greatly exceeds the current offer.

Using the figure of 5.4 hospitalizations per 100 persons per year and an average duration of stay of 5.4 days, we can obtain a rate of 292 hospitalization days per 1,000 persons per year. Roemer mentions rates collected by a 1990 OECD survey of 700 for Turkey, 1,200 for Spain, 1,700 for USA, 2,000 for Canada, 3,500 for Germany and 5,200 for Norway¹.

¹Roemer, M. I., National Health Systems of the world. Oxford University Press, Oxford, 1993

(B) Outpatient services

The figures for MSP facilities in 1993 indicate that 4,539,192 ambulatory visits were made, 33.7% of which in children under 5. This translates into a rate of 0.88 visit per person per year (1.81 visit per children under 5). 46% of those visits were first time visits (44% in children), so that the rate of ambulatory visits for new disease episode or new event is reduced to 0.4 and 0.8 visits per year for general and under-five children population respectively.

1,206,965 attentions were given at CESAR level (27%) and 1,777,848 at CESAMO level (39%), whereas the hospitals provided 34% of ambulatory care contacts. This corresponds roughly to 2,210 attentions per year at CESAR level and 9,070 at CESAMO level, i.e., for an average of 220 working days per year, 10 attentions per day per CESAR and 41 per CESAMO (the latter subject to wide variations according to the size of the CESAMO).

The IHSS reports for 1993 a total number of 1,288,007 ambulatory attentions, including 330,511 in children under 5. 635,884 visits (49%) were at hospital or hospital-linked clinic level; the remaining 51% in peripheral clinics. Geographic distribution for these ambulatory visits was:

Tegucigalpa	746,729
San Pedro Sula	481,168
Juticalpa	3,747
El Progreso	23,816
Danlí	26,181
Choluteca	6,366

The business-based health system accounted for 3,462 visits in Tegucigalpa, and 85,132 in San Pedro Sula.

Adding the MSP and IHSS figures would give a total of 1.12 visit per person per year for the general population and 2.20 visits per year for the population under 5 years old.

Visit per person per year for the general population

<i>Institution</i>	<i>Visit/year (gen. pop.)</i>	<i>Visit/year (under 5)</i>
MSP	0.88	1.81
IHSS	0.25	0.39
Both	1.12	2.20

A regional comparison of consultation rates for the general population shows a wide range of figures for this parameter, making difficult an evaluation of adequacy:

Regional comparison of consultation rates for the general population

Country	Visit/year	Country	Visit/year
Honduras	1.09	Nicaragua	1.80
Costa Rica	3.02	Chile	3.10
El Salvador	0.23	Columbia	0.56
Guatemala	0.16	Peru	1.96

Source: Health conditions in the Americas, 1990. Data are from 1988.

Yet, one should notice that the rate for Honduras (provided the sources are roughly the same) has not changed much in the period 1988-93, denoting either an increase in the perceived health status of the population or a failure to improve access to services.

No data exists on the production of services by the private sector: the number of physicians providing health services in Honduras, as given by the physicians' association, is 3,961, including 2,552 general practitioners and 1,409 specialists, with an overall density of 77 physicians per 100,000 people, i.e. 1,306 persons per physician. Again, the density of physicians is determined both by the country's economic level and type of health system, so that there is no golden standard. Roemer (op. cit.) quotes figures of 217 for the USA, 424 for the Soviet Union, 15 for the Philippines, 89 for Brazil, 71 for Nicaragua, 11 for Indonesia, 60 for China, all in 1986. In any case, a major criteria for evaluation of adequacy would be the wide range of density over the territory (see Figure 4-7).

2) Coverage of services

Services for MSP have traditionally be said to cover 60% of the total population, while IHSS would cover 10%. However, these general concepts should be taken with caution. The level of coverage will probably vary according to the type of service provided. A good estimate could be provided by the coverage of antenatal care, a well-accepted preventive intervention: the last Epidemiology and Family Health Survey found that in 1991/92, more than 70% of pregnant women had at least one institutional control, which would tend to confirm the previous figures. However, coverage for postnatal care is much lower (around 30%) whereas institutional attention of delivery ranges around 40-45% (see Figure 4-12).

Similarly, even though the number of IHSS beneficiaries is estimated at 1,076,086 in 1993, more than half of these do not benefit from the full range of services offered to contributing members and would have to seek other providers (or to pay for additional services).

The household survey provides additional elements that can help determine the actual coverage for different health services and mix of providers that a household is likely to utilize for different health problems. For instance, Figure 4-12 shows the proportion of households that utilized a health provider at least one during the year previous to the survey: private providers include NGO or for profit providers and drugstores but exclude traditional healers; MSP figures include community health workers. If it is fair to assume that each household would have to deal, at least once in year, with a health problem that deserves medical care, then the patterns of use of the different types of providers could be interpreted as an equivalent to access to health services. Thus the figure shows that the population without access ranges from 11% in the urban area to 21% in the rural area, with differences according to the study's zones.

Those figures can then be used to focus the investment or improvement policies towards population groups with low coverage and difficult access to services, according to the guiding principle of equity. Indeed, estimation of population covered and not covered by basic services is part of the local programming methodology, although its rigid application may tend to restrict access and coverage rather than motivate towards its improvement.

3) Quality of services

In the end, the quality of health services is determined by the combined situation of all other components of service delivery. Specific focus on quality generally tends to be forgotten when working in difficult conditions and in the absence of short-term alternatives. Yet, it must be emphasized that, even under those very harsh working conditions, including insufficient overall resources for the health sector, quick deterioration of facilities and equipment, insufficient allocation of human resources and lack of supportive supervision, much progress has been accomplished, as witnessed for instance by the decrease in infant mortality rate and increase in life expectancy. The price to pay often includes the allocation of scarce existing resources (in terms of time, attention and money) towards the main technical and administrative requirements, at the expense of interpersonal and institutional provider/client relationships, often leading to a perceived low quality of services, especially in the public sector. In fact, these relationships are currently determined by each provider's willingness to invest in this area with, as in any organization, the best people working along with the worse ones.

Apart from specific solutions to the problems mentioned in the sections above, the concept of quality of services is being addressed in Honduras through various mechanisms, and a quality-centered or client-oriented focus among health institutions has been recently initiated. Among the principal initiatives are:

- supervision system: always a weak link, it suffers from insufficient resources and low priority allocation, although isolated initiatives, both at central and operative levels, have tried to systematize and maintain the process (see supervision section).
- hospital self-evaluation and certification process: the certification process has been conducted in 14 of the MSP hospitals, though only once in each institution; repeated visits are needed to observe the expected changes in the conditions observed item by item by a joint team from the hospital division and the institution's staff.
- special surveys, such as those on lost opportunities in immunization and in family planning health-center based activities, have tried to focus the attention on the integrated approach of the patient, which is also stressed by revised standard of care for women and children.
- new training focus for the health personnel, based upon definition of local needs as perceived by them and the population they serve, with hopefully an improvement in their motivation towards the delivery of better services.

Here again, the field survey does provide some indications as to the perceived quality of services and the areas of changes needed to improve this perception. However, the interpretation of this area of the survey should take into account that the question asked was not formulated as: "What was the quality of the health care you did receive?" but as: "Would you be willing to return to the same health care provider/site, if you happened to have the same problem again?". Under these circumstances, a high level of "user's satisfaction" can be less meaningful if said user has limited options with regards to the selection of a preferred provider.

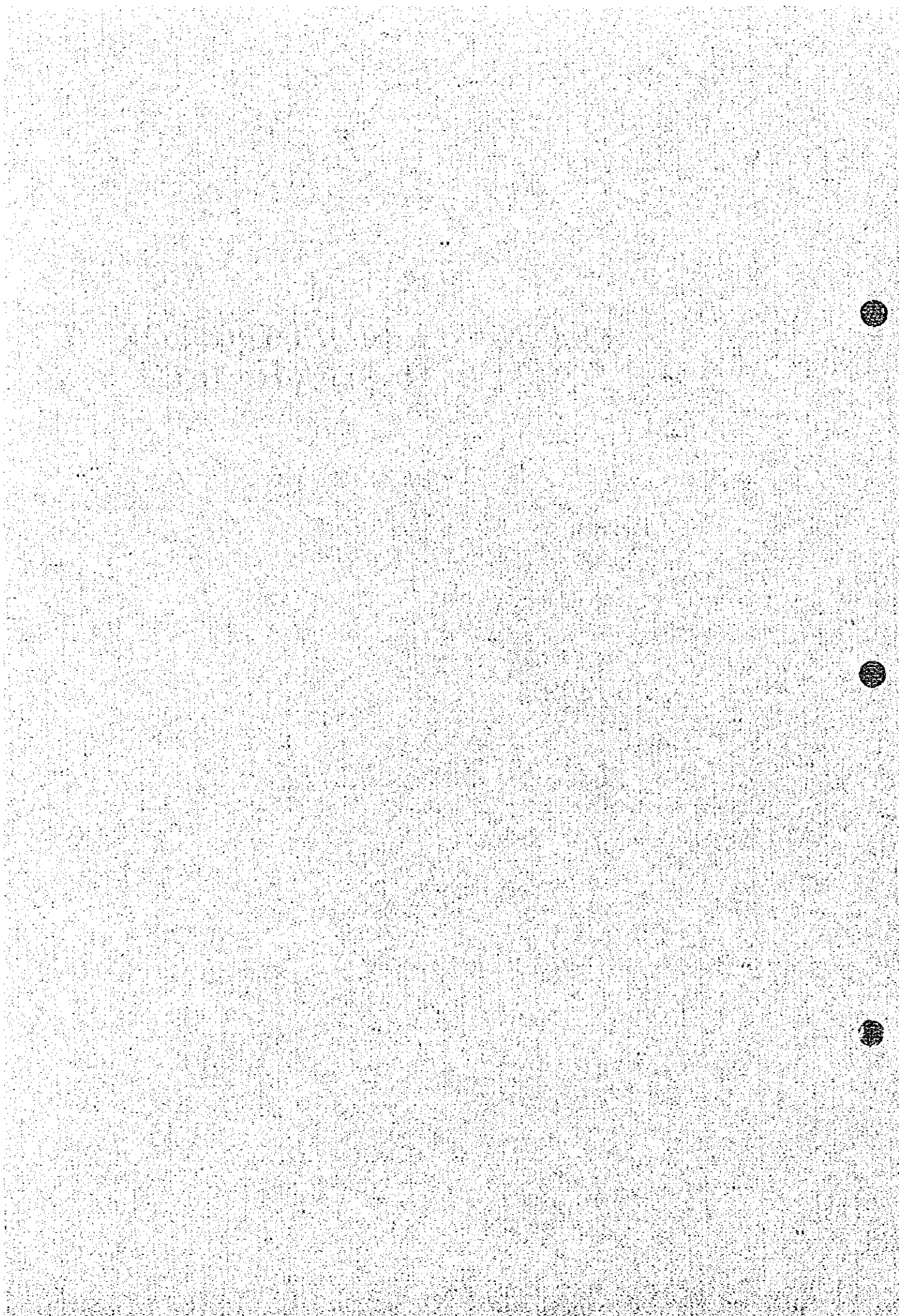
Given these restrictions, and using unweighed proportions, the reasons mentioned for not willing to return to the same hospital were related to high cost (37%), inadequate care (23%) or lack of results (14%). When referring to ambulatory curative care, the main reasons for not willing to return to the same facility included lack of result (29%), high cost (20%), inadequate care and lack of drugs (15%). Corresponding figures for ambulatory preventive

care were: lack of result (21%, a curious rank, if one assumes that preventive/control visits are not aimed at immediately solving a problem), inadequate care, high cost and lack of drugs (16% each).

A specific aspect of quality control is that of medical malpractice, for which no register exists, but which are thought to exist anyway. Ideally, the mechanisms to deal with such problems would include in a logical sequence direct supervision, peer review and evaluation and judiciary demand. However, the physicians' association has not yet taken a major role in the protection of ethics and professional conduct and no other professional association has acquired similar importance. In addition, the prevalent cultural patterns and the problems inherent to the judiciary systems have made this solution an infrequent one, also such occurrences have increased in the past few years.

CHAPTER 5

***PLANNING FRAMEWORK FOR THE
MASTER HEALTH PLAN***



5. PLANNING FRAMEWORK FOR THE MASTER HEALTH PLAN

5.1. *Goals and targets*

The goal of the Master Health Plan is to improve the health status of the Honduran population through the resolution of eleven priority health problems and the improvement of factors that affect health outcomes in the three dimensions of: context, household and community-level behaviors, and delivery of health services. The eleven priority health problems are: IMR, MMR, HIV/AIDS, vector-borne diseases, accidents, violence, chronic degenerative diseases, malnutrition/food security, access to safe water and basic sanitation, environmental health and occupational health.

The Government of Honduras has already set numerical goals for IMR, MMR, malnutrition rate and access to water and sanitation for the year 2000, under the National Action Plan for Infancy and Childhood, agreed upon at the Regional Conference in 1991. However, the extrapolation of these goals to the year 2010 and the definition of measurable goals for all of the priority problems is made difficult by the following factors:

- lack of baseline data or measurement tools for a given problem: under-reporting of vital or health-related events and lack of community-based morbidity surveys, current lack of definition of activities related to emerging or future health problems (such as environmental health, chronic degenerative diseases);
- insufficient knowledge of the potential impact of proposed activities on the problem addressed: recent implementation of initial activities/strategies related to a given health problem, increasing marginal cost of obtaining health benefits, non-linear relationship between socio-economic context, health-related activities and health outcomes

Considering those factors, targets for the NMHP with respect to the priority health problems have been quantified whenever possible, using a combination of these approaches:

- assessment, use and extrapolation of GOH pre-set objectives, as defined by the National Action Plan for Infancy and Childhood
- regional comparison of health indicators from neighboring countries of Latin America
- consensus obtained from workshops, discussion with counterparts and Coordination Committee, given the previous considerations.

Goals of Master Health Plan

<i>priority health problems</i>	<i>1990</i>	<i>1996</i>	<i>2000</i>	<i>2010</i>
1. infant mortality rate(/1,000)	50	44	33	20
2. maternal mortality rate(/100,000)	220	181	110	50
3. malnutrition among under-5 years of children(%)	38	-	27	20
4. access to safe water and basic sanitation				
(1) access to safe water(% households)	66	-	100	100
1)urban	88	-	100	100
2)rural	49	-	100	100
(2) access to basic sanitation	62	-	100	100
1)urban area	89	-	100	100
2)rural area	41	-	100	100
5. AIDS and sexually transmitted diseases				
			decreased incidence of HIV infection	
			a. stabilization of AIDS incidence	
			b. safe blood supply	
6. Vector-borne diseases			decrease endemic levels of parasitic infection-	
			outbreak avoided	
7. Accidents			incidence decreased	
8. Violence			incidence decreased	
9. Chronic-degenerative diseases			prevention/screening measures implemented	
10. Environmental health			legal support provided	
11. Occupational health			development of legal and regulatory system	

Remarks: Goals of priority health problems 1-4 for the year 2000 were defined under National Action Plan for Infancy and Childhood, 1991.

Source (for data of 1996): National Epidemiology and Family Health Survey 1996

Quantitative objectives may be defined for the other health problems when proper baseline measurements have been conducted or when specific projects, programs or activities are designed on the basis of the guidelines included into this MHP. In addition to impact objectives, such as decrease in incidence for a given disease, intermediate objectives can be defined during the development of programs or activities at national or regional levels. Examples of such objectives include;

- number of integrated health centers or emergency clinics created and actually functioning,
- decrease in the PHC workload of the referral hospitals,
- number of trained human resources, assignment of trained resources to key PHC positions,
- % of increase in cost recovery funds, expansion of IHSS coverage,
- increase of access to health services, by type of service and population groups.

5.2. Scenarios

The timely and complete achievement of the goals and targets set for the NMHP is contingent upon several possible scenarios, that is, sets of overall conditions for its implementation. The most relevant of these scenarios refer to socio-economic and demographic conditions and to long-term health policies. The assessment of their continuing validity at regular intervals during the Plan's time frame will allow for timely revision of its targets and strategies.

5.2.1 Socio-economy and demography

(1) Growth of GDP

Based upon the preliminary information provided by SECPLAN and the Central Bank of Honduras (BCH), the most likely scenario is a slow growth of GDP, illustrated in the following table.

Projection of GDP 1980-2010

Cases	1980-1994 Actual	1994-2000 Future	2000-2010
Case G1 (Pessimistic)	3.10	3.10	3.30
Case G2 (Medium)	3.10	3.50	3.70
Case G3 (Optimistic)	3.10	4.00	4.20

Note: Real growth rate of GDP (1980 to 1994) estimated from BCH data

(2) Population growth

The first scenario uses the projections provided by SECPLAN while the second one present a quicker population growth variant based upon (refer to Table 5-1)

Projection of population growth 1988-2010

Cases	1988-1995 Actual	1995-2000 Future	2000-2010
Case P1 (Pessimistic)	2.90	2.90	2.75
Case P2 (Optimistic)	2.90	2.55	2.13

Preliminary results from the 1995 National Epidemiology and Family Health Survey indicate that the national TFR estimate for the period 1993-1995 is 5.02, below the expected

4.5 indicated I the SECPLAN, thus indicating the need to use the more pessimistic demographic scenario, while emphasizing the development of population-related and family planning activities.

(3) Resulting changes in per capita GDP

The combination of GDP and population growth rates gives a better idea of the financial resources that will be available to the country in the future, by showing per capita amounts:

Annual per capita GDP growth rate (%) by different scenario

	Annual GDP		growth rate		(%)	
	2000	2010	2000	2010	2000	2010
Pop. GR (%)	3.10	3.30	3.50	3.70	4.00	4.20
2.90/2.75	0.20	0.55	0.60	0.95	1.10	1.45
2.55/2.13	0.55	1.17	0.95	1.53	1.45	2.07

The more pessimistic hypothesis gives a cumulative increase of per capita GDP of 6.7% over the project life time $[(1.002)^5 \times (1.0055)^{10}]$, whereas the more optimistic one gives a 31.9% increase in per capita GDP over the plan's life $[(1.015)^5 \times (1.021)^{10}]$.

(4) Migration

Different levels of living conditions and opportunities for employment among departments and municipalities have promoted transmigration within the country:

- rapid growth of migrant population from rural areas to the new urban centers such as La Ceiba, Tocoa, Comayagua and Juticalpa; and slow, but still high rate of migration into the metropolitan areas of Tegucigalpa and San Pedro Sula;
- out-migration from rural poverty areas.

Thus the extrapolation of these tendencies over the NMHP's time frame allows a characterization of the country's department according to their population growth rate as compared to the national average:

- 1) departments with less than national average population growth rate (1.8 to 2.0%)
- type 1 (Valle, Choluteca): because of lack of water and potential land resources for development

- type 2 (Francisco Morazán): rapid emigration from rural areas of this department to Tegucigalpa because of low employment opportunity and poor living conditions in these areas, and slowing of the capital city's growth
- type 3 (Copán, Cortés, Santa Bárbara): rapid emigration from rural to urban areas of these departments, compensating the quick development in the valley area of the north coast and San Pedro Sula

2) departments with population growth rate similar or slightly superior to national average (2.1 to 2.3%)

- population growth rate of El Paraíso, Intibucá, La Paz, Lempira, Ocotepeque and Yoro have been kept at high level even without enough employment opportunities because of high fertility and a passive attitude of inhabitants towards transmigration to the developing areas
- Atlántida represents a balance between rural out migration and more recent immigration and growth in La Ceiba, while the Bay Islands (Islas de la Bahía) have enough opportunity employment but limited absorption capacity for new population

3) departments with higher than national average population growth rate (2.6 to 2.7%)

- Colón, Comayagua, Olancho: because of higher employment opportunities from large scale agricultural development, mainly in the north and the central valley areas
- Gracias a Dios: less emigration because of poor accessibility to the developing areas and higher population absorption capacity with higher agricultural development potential

(5) Age and gender structure

Persisting high fertility rates, especially among younger women, will keep the Honduran population a young one. The number of people over 60 years of age will increase slowly during the plan's time frame, more rapidly afterwards. Different job opportunities will mean a persisting excess of young female population in cities.

5.2.2. Long-term policies

In planning for future activities for the Honduran health sector, it is essential to go beyond the demographic and economic scenarios and to consider the political and social settings, i.e. the priority awarded to health and health services by the Honduran people and its government, and the way in which health services are to be provided, as these will ultimately influence in a decisive manner the desired results in terms of health status

improvement. An example to the point is the fact that Honduras, through specific health sector activities such as immunization and oral rehydration therapy, and despite adverse socio-economic conditions in the last decade, has managed to maintain a constant reduction of its Infant Mortality Rate.

This section will thus recognize the main policy orientations sustained, with a remarkable continuity in spite of changes in the leading political party, by the Government of Honduras over the previous years, acknowledging that these orientations constitute an important element of the planning framework for the National Master Health Plan.

In addition to those policy responses currently implemented in Honduras, other policy issues with potential impact on strategic options are likely to be addressed over the time period of the National Master Health Plan. Although not necessarily the targets of specific initiatives incorporated in the National Master Health Plan, these issues will affect the context within which strategies will be implemented.

(1) Basic principles of health policy

These basic principles constitute fundamental criteria through which all strategies implemented under the National Master Health Plan should be evaluated. They refer to the following attributes:

- equity, that is the availability of health services to all persons and groups, according to their needs, which implies specific efforts to reach the most deprived population groups;
- effectiveness, that is, the technical adequacy of the attack strategies to actually solve the problem they are aimed at, including the improvement of conditions of living;
- efficiency, which is the ability to solve those problems at the lowest possible cost;
- social participation, which implies the active participation of the community in the definition of its needs, planning, implementation and evaluation of the actions taken to fulfill those needs.

In the end, the overall goal of organizing the health and health-related sectors is to provide to the whole population of Honduras access to quality health services. This concept of access is of critical importance to the country's health authorities and will be shaping the actions in this sector for a number of years. It should also be understood that it is not

limited to direct health care services, but also includes aspects of food security and access to water and environmental sanitation.

(2) State modernization, decentralization and local programming

The state modernization process, which was initiated under the previous government, involves two orientations critical to the organization of health services in the future:

- one is an increasing devolution of authority to the municipalities, made possible through a new institutional framework, the Law of Municipalities, which also sets financing mechanisms through local tax collection and transfer from the national budget to the municipalities;
- the other orientation is the optimization and decentralization of government services which, in the health sectors, shifts responsibilities and decision-making ability to the intermediate levels of regions and areas. This process will provide a legal and financial basis for, and complement the impact of local programming, an older strategy implemented by the MSP to improve the response to specific local needs and better reach the population with low access to health services.

Obviously, the implementation of the state modernization and decentralization processes will imply a stepwise approach to the definition of respective responsibilities between municipalities, intermediate and central level of ministries, especially in the health sector, in order to avoid excessive fragmentation of services, which could lead to decreased access, and maintain an efficient network of services.

(3) High risk approach and gender focus

The limited availability of resources for the health sector and the principles of equity and efficiency will call for the implementation of efforts focused towards the high-risk groups among the population. This approach implies as a first step the definition and identification of these groups, which will be obtained through the analysis of health and living conditions conducted at local level).

Action directed more specifically towards these high risk groups will thus contribute to reduce the inequalities among the population and improve the overall health status.

Among the traditional high risk groups, women deserve a more specific and comprehensive approach through the application of gender focus in the processes of needs definition,

planning, implementation and evaluation of strategies. In addition to contributing to the direct improvement of health status in the female half of the population, the systematic application of gender focus would reinforce the scope of social participation activities in the health sector and amplify the impact on child and family health-oriented strategies.

(4) Regional development policy

Development planning during the previous years has focused on the northern area of the country (with the recent growth of the "maquila" industry) and on the needs to accommodate rural-urban migrants to the main cities of Tegucigalpa and San Pedro Sula. The National Master Health Plan recognizes the need for human development planning at the national level and emphasizes the priority of promoting, creating and/or developing new poles of regional development based in small to medium-size towns with surrounding agricultural potential. These new development poles, with both agricultural and industrial sustainability, provided with adequate social infrastructure and services, would thus attract rural emigrants from dispersed areas and contribute to the decongestion of the two metropolis, whose absorption capacity is reaching its limits (especially in the case of Tegucigalpa). The elaboration, within the NMHP, of three model programs corresponding to these different socio-economic settings is a way to prepare models for health systems that respond to this need for regional development planning with a greater level of details.

(5) Financial commitment

Although many of the strategies of the NMHP aim at improving the efficiency of health services and thus, at reducing their cost (or increasing their coverage and quality for the same cost), the achievements of the Plan's objectives will depend upon continuation of current levels of funding for health and social sectors. More probably, however, additional funding will be required, especially in the area of human resources, supplies and maintenance.

The need to maintain an internationally acceptable balance between development of social expenditures on one hand, and economic structural adjustment on the other hand makes it unlikely that the proportion of national budget allocated to health and social sectors be significantly increased over the Plan's time frame. Thus, hypothesizing in this direction will indeed have to be on the cautious side. In a similar way, external contributions (either through loans or grants) are unlikely to register marked positive variations, as long as the

global political and economic focus of the main donors concentrate on the Newly Independent States and the Pacific rim rather than on Central America. It is expected however that a well-designed National Master Health Plan reflecting a consensus of all actors regarding the main problems and orientations would support the implementation of policies for the health sector by external donors.

Internally, the decentralization process and the transfer of funds from central government to municipalities do not, in principle, imply a significant increase in resources. There must be more efficient use of these funds, through better allocation and control mechanisms. The other remaining sector with potential financial growth over the next years would be private or mixed expenditure, either directly through cost recovery mechanisms, or indirectly through increased coverage of pre-paid schemes from the IHSS or the private sector. These schemes would free additional resources for the public sector. This mechanism, however, would depend upon the extension of the formal employment sector and the pace of economic development.

5.2.3 Vision for the future: how will the Honduran health system look like in 2010

Along with the past history of the health services organization in Honduras and the likely evolution of the epidemiological profile described in Chapter 4, all the factors mentioned above will eventually influence the future evolution of these services and the future health status of the Honduran population. It is assumed that the decentralization and state modernization will proceed and that, accordingly, municipalities will take increasing responsibility in the delivery of health services, with initial emphasis on environmental and preventive health. Health education and community participation will make the population more aware of its health needs and of the strategies available for preserving their health, especially when facing current environmental challenges and newly emerging risk factors linked to less traditional lifestyles. In addition, they will also take a more active attitude towards the maintenance of their own health and will acquire more control over the way health services are organized and delivered.

The health system will need to adapt to this evolution: although there has been draft proposals elaborated for a "singly" health system (sistema unico de salud), where the resources of both MSP and IHSS would be included into a unique organization, the NMHP considers as a more viable solution, within the Plan's time frame, the continuation of a

mixed provider system. Under this perspective, the goal of the health system would be to progressively increase the private financing of health care, either through increased coverage of the IHSS, through private insurance schedules or through improved cost recovery mechanisms, thus freeing more resources for the public sector to achieve its social mission of providing services to the least affluent group of the society, and eventually increasing the access to these comprehensive services.

This marginal expansion of prepaid services delivered through a mix of public and private providers would constitute, however, the first step towards the more likely long term structure of health services, when the continuing social and economic development would allow the setting of a national insurance system. Under this system, managed by a nationwide social security institution, services would be provided through contracting mechanisms by the public or private sector, organized on a regional or departmental basis; the MSP would retain its policy setting and supervisory role, with limited involvement in the actual delivery of health services.