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**INSTITUTIONAL ANALYSIS/EVALUATION  
HEALTH SYSTEMS MANAGEMENT PROJECT  
DOMINICAN REPUBLIC**

**(ENGLISH VERSION)**

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**TECHNOLOGIES FOR PRIMARY HEALTH CARE (PRITECH) PROJECT**

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HEALTH SYSTEMS MANAGEMENT PROJECT  
PROJECT NO. 517-0153  
DOMINICAN REPUBLIC

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EXECUTIVE SUMMARY

INSTITUTIONAL ANALYSIS/ EVALUATION  
HEALTH SYSTEMS MANAGEMENT PROJECT  
PROJECT NO. 517-0153  
DOMINICAN REPUBLIC  
May, 1988

EXECUTIVE SUMMARY.

An evaluation of the Health System Management Project, Project 517-0153, and an analysis of certain institutional constraints confronting the Secretaria del Estado de Salud Publica and Asistencia Social (SESPAS) were conducted in May, 1988. The consultants were asked to measure outputs accomplished under the Project against projections, to analyze and comment on the institutional reform process, to make judgements regarding the degree of institutionalization and the probability of sustaining accomplishments and to identify additional management areas into which the project might extend.

The Project addressed three management areas - finances, management information systems and personnel and considerable accomplishments in each are apparent. In the area of finances, procedure manuals have been developed for almost all critical accounting functions and SESPAS personnel at all levels trained in their use. New budgeting procedures which tie productivity to funding levels have been developed and used in at least one budgeting cycle. Models and procedures have been developed to computerize the financial system and tie it into the personnel system as well as provide vastly improved management information. A cost accounting system has been developed and should be implemented by the current PACD. An information system integrating financial, personnel, epidemiological and service data banks has been developed and its utility as a management tool should become apparent with the procurement of the computers contemplated under the project. The data collection instruments have been revised and rationalized and personnel at all levels trained in their use. Although off to a slow start, reforms have begun in the personnel area, starting with the development of a personnel policy and a restructuring of the division to support that policy (both still in discussion). Other unanticipated accomplishments include improved interinstitutional coordination as a result the multioffice representation in the Project Coordinating Committee and the integration of the information and computer offices into the broader Health Systems Development Directorate,

Unresolved problems include delays in the purchase of computer equipment, the underutilized potential of the budgeting system for making resource transfers, the relative lack of progress in the personnel area and the policy of free health care which hinders the development of an accounting system for collecting and utilizing user fees.

The institutional reform process is extremely effective and supported by a highly professional and qualified team of consultants. The process includes an initial in depth analysis of each problem area with active participation of both consultants and SESPAS staff, the preparation of a position paper, the development of a highly detailed work plan, development of procedures, manuals or policies according to the work plan, the revision of those policies at various levels resulting in final approval by the Secretary of Health and finally implementation through training activities.

Certain reforms, such as revised accounting procedures, are already completely institutionalized. By all indications the budgeting and information systems will also be institutionalized by the end of the project. Too little experience is available at present to make a judgement about the institutionalization of personnel and cost accounting reforms.

Drawing upon recent studies of the sustainability of AID health programs in Honduras and Guatemala, it is judged that Project activities are likely to be sustained. Particularly important to sustainability are the recognized effectiveness of the project, the integrated nature of project implementation, the high degree of institutional support for the project and the absence of onerous recurrent cost implications. Personnel turnover, while an inconvenience, will not be a major impediment to sustainability.

Three additional management systems were analyzed for potential inclusion in the project. These were purchasing, maintenance and transportation. There are at least five different purchasing systems with considerable weaknesses in the programming, purchasing and control aspects. It is recommended that purchasing, with one exception, be consolidated under one office, that written manuals and procedures be established and that bulk purchasing be carried out wherever possible. Maintenance constraints are multiple and include underbudgeting, poor equipment, poor training, miserable shop facilities and organization and poor equipment selection. Recommendations include the development of norms and procedures for maintaining critical pieces of equipment, improvement of maintenance shops, increase in maintenance budgets, staff training and involvement of maintenance personnel in equipment selection. In the area of transportation, a lack of vehicles and poor management of the few vehicles available at the central level is noted. The procurement of additional vehicles through donor support and the organization of a motor pool at the central level are recommended. Analyses also indicate that considerable work remains to be done in the three areas in which the project is currently active - finances, information and personnel.

The team arrived at the following conclusions:

1. USAID/Dominican Republic, SESPAS and Clapp and Mayne are to be congratulated on having designed and implemented an extremely successful project with limited funds in a relatively short period of time. This project opens up the possibility for having a considerable impact on health care by providing management with the tools for improved management of its limited financial and human resources.

2. Several elements of the project have been institutionalized and given the effectiveness of the methodology being used there is every reason to expect that most other elements of the project will also be institutionalized. The only potential exception is in the personnel area

where lack of availability of counterpart time and the complexity of the issues involved will require renewed commitment on the part of SESPAS staff to assure that work plan goals are met. Another exception is that part of the financial and information systems which depend on the presence of the computers. AID should make every effort to resolve the outstanding procurement delays to assure that the computers and their software arrive in sufficient time to allow them to be fully integrated into SESPAS functioning while technical advisors are still present.

3. The factors favoring sustainability, particularly of the accounting procedures, far outweigh the factors against sustainability. An extension of technical assistance input would certainly favor sustainability of other inputs as well.

4. The chaotic personnel policies and practice currently in force in SESPAS are the most significant factor threatening long term survivability of reforms. Implementation of the work plan in the personnel area and expansion and extension of project activities in this area would help assure sustainability of project activities.

5. At present, the Project is developing the essential tools for improved management. It remains in the hands of SESPAS leadership to assure that these tools, especially improved information, are used for making management decisions. Key among these decisions is the shifting of resources to increase productivity.

6. Project activities should be extended for an additional period and expanded to include, at least, the purchasing area.

7. The reform methodology has been very effective. The degree of participation of counterparts at every step, the central role of the Coordinating Committee and the highly professional and disciplined approach of Clapp and Mayne advisors have been very important.

8. The current "window of opportunity" provided by the support of the current SESPAS administration for project activities will most likely be open for another two years. This presents the possibility of aggressively pursuing the current work to see that it is completed, consolidated and expanded beyond the current regions. Also, at least one other key area, purchasing and supply, should be addressed. The size and complexity of the maintenance problem and the presence of other donors, PAHO and IDB, working in this area speak against the Mission getting involved in it.

The following recommendations are made:

1. During the remainder of the project, SESPAS should assure the highest priority be given to completing work plan goals in the area of personnel.

2. USAID/Dominican Republic should take the actions necessary to assure expedient delivery of computers and associated software.

3. Given the success of the project, the Mission and SESPAS should agree to extend the project for an additional two years. Elements of the project extension should include the following:

a. Personnel.

1. Development of work standards and job descriptions.
2. Development of supervision guidelines.
3. Training of supervisors.

b. Finances

1. Consolidation and fine tuning of budgeting process.
2. Extension of computerized financial systems in the six regions not included in the original project.
3. Supervision of the system at the central, regional and facility level.
4. Adjustment and expansion of the cost accounting system based on experience with the current project.

c. Information

1. Expansion of the computerized information system into the six regions not covered under the current project.

d. Purchasing and Supply

1. Development of norms and procedures to govern all aspects of the purchasing and supply process including programming, procurement, storage, distribution and evaluation and control.
2. Consolidation of all central level procurement under a central procurement authority, with the exception of the current rotating funds which should be maintained.
3. Expansion of current warehousing capacity after conducting a needs assessment.
4. Increased use of bulk purchasing, particularly of medications.

e. Supervision

1. Purchase of eight vehicles, one for each of the two pilot regions and for each area within those regions to permit supervision and follow-up on project activities.
2. Development of preventive maintenance and vehicle control procedures for those eight vehicles.
3. Development of guidelines and procedures for the operation of a motor pool at the central level.

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HEALTH SYSTEMS MANAGEMENT PROJECT  
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May, 1988

I. INTRODUCTION.

A. Scope of Work.

An evaluation of the Health Systems Management Project, Project 517-0153, and an analysis of certain institutional constraints confronting the Secretaría del Estado de Salud Publica and Asistencia Social (SESPAS) were conducted in May, 1988. The Scope of Work provided by USAID/Dominican Republic for that study is as follows:

1. Determine whether the administrative reform component of the project is being implemented in accordance with the Project Agreement and whether the outputs listed in the ProAg are being accomplished.
2. Analyze and make recommendations regarding the process by which reforms have been made thus far.
3. Determine the mechanisms and strategies by which SESPAS management systems are institutionalized. Indicate the extent to which personnel turnover and inadequate training hinder the institutionalization process.
4. Determine whether the project is successfully institutionalizing significant and necessary improvements in SESPAS management systems. Determine the extent to which improvements can be expected to persist beyond the life of the project.
5. Recommend which additional management systems should be reformed (if any) and provide a listing of specific reforms to be made.
6. Determine whether management reform has a substantive impact on health care delivery.
7. Determine how the project can assist in establishing a system of basic incentives in SESPAS that would facilitate the recruitment and retention of competent personnel for key management and technical positions.

### 3. Methodology.

The evaluation team was composed of one public health physician and one maintenance/procurement specialist. The team conducted in depth interviews with key SESPAS personnel involved in actual or potential project activities, Clapp and Mayne advisors and AID project managers to answer the questions posed by the scope of work. See Annex A for a list of persons interviewed. The team also visited two health regions and two SESPAS subcenters. Finally the team reviewed pertinent documentation. See Annex B for bibliography. In the final week of the evaluation preliminary drafts of the report were presented and discussed with SESPAS staff in order to validate and/or correct information. A similar was held with USAID management.

### C. Description of Project.

The Health Systems Management Project (Project No. 517-0153) is a US\$ 2,000,000 (US\$ 1,500,000 AID and US\$ 500,000 GODR) effort aimed at improving the management systems of the Secretariat of Public Health and Social Assistance (SESPAS) and concurrently at developing the capacity within SESPAS to administer and manage health services.

The Project has three main components. The first is finances where the following outputs were defined:

1. Develop procedure manuals covering the routine operation of financial planning and financial transactions;
2. Establish a single procurement and payment voucher system whereby funds to pay for purchases are identified and reserved before the procurement is made;
3. Establish effective linkages with the Personnel Division so that personnel transfers and terminations are communicated to the Payroll Office in time to stop the issuance of payroll checks;
4. Establish a cost accounting system that shows the costs of providing services in different types of facilities and making this information available on a regular basis to the Management Information System;
5. Provide monthly summaries to the MIS of the budget's status by program, subprogram and activity;
6. Provide information on a monthly basis of the flow of funds to the health regions and local levels;
7. Establish an accounting system that would permit selected health facilities to experiment with implementation of a use for service cost recovery program.

The second is management information systems to accomplish the following:

1. Conduct an inventory of information that key decision-makers need, identify the sources of the information and identify the information that is presently available;
2. Prepare manuals and protocols that list the information to be included in the MIS for the collection and dissemination;
3. Drawing upon data from the areas of epidemiology, financial management and personnel, the MIS will report regularly on the utilization rates of facilities by type and geographic location showing their relative efficiency based on inputs and outputs and overall reduction of common diseases;
4. Provide data on potential health problems facing the D.R. based on key disease surveillance programs for malaria, dengue and schistosomiasis among others;
5. Provide data on key health indicators including malnutrition, infant mortality and maternal mortality, among others.

A third area of involvement is the personnel system with the following programmed outputs:

Provide an inventory of all direct hire persons in SESPAS by region and facility;

2. Provide procedure manuals for central and regional level administrative offices on how to handle the most common personnel function;
3. Together with the payroll issuance of the Financial management Division, project the personnel costs by facility;
4. Develop guidelines for personnel supervision and work performance standards.

In order to implement the Project a contract was awarded to the firm of Clapp and Mayne in August, 1986 with actual initiation of activities in October of that year. The methodology used by Clapp and Mayne is described in greater detail in the body of this report.

## II. PROJECT ENVIRONMENT.

### A. SESPAS Infrastructure.

SESPAS physical infrastructure is composed of 515 rural clinics for maternal/child health, preventive medicine and emergencies staffed with two physicians, supervisor of promoters and nurse auxiliaries. It relies on an additional 50 subcenters with 20 - 30 beds whose focus is on maternal/child health. These centers are usually staffed by pediatric, ob/gyn and internal medicine specialist and care capable of providing simple surgical procedures. Finally there are some 48 hospitals which had been ignored by previous governments and suffer from severe maintenance and management problems.

## B. SESPAS Management Organization.

SESPAS employs some 45,000 employees, including over 5,000 rural promoters who receive a symbolic salary. The SESPAS organization structure and job descriptions for key positions are found in Annex C.

## III. ACHIEVEMENT OF PROJECT OUTPUTS.

### A. Financial Management

There are seven outputs programmed under the financial management component of this project. All but the last, a cost-recovery program will be accomplished by the Project's PACD.

#### 1. Develop procedure manuals covering the routine operation of financial planning and financial transactions.

This aspect of the project involves three subsystems: budgeting, accounting and cost accounting. Each will be discussed separately

##### a. Budgeting.

The project introduced a new budgeting system which has been well received at all levels of the health system and has even drawn the attention of the National Budget Office as an excellent model for potential application in other Ministries. The model, a "bottom-up" planning model, involved the application of financial planning instruments by the directors and administrators of each SESPAS region, area, hospital and sub-center whereby they directly tied productivity goals to budgeted funds. Lower level managers thereby participated in budget development, resulting in a heightened awareness of the cost of their services. The Budgeting office of SESPAS evaluated the process in four regions and based on that will adjust the process for the upcoming year. Manuals, while not yet produced, will be ready prior to the current PACD.

A significant problem, however, is that apparently resource transfers were not made on the basis of the new budget. Although new criteria such as population base, productivity, number of consultations, etc., was the basis of budget development and the allocation of resources, it appears that the previous year's budget was the basis for actual budget execution. This means that, in practice at least, the new budgeting process did not have the desired effect on resource allocation. In addition, at least one of the regions complained that despite the participative process, they still did not know what their approved 1988 budget was. Also, although the budget established the basis for an objective year end evaluation of performance, it is still too early to know whether it will be used for that end. At the very least the new process puts into place one of the key tools for improving financial management of SESPAS resources. Also, the original project design called for the implementation of this system only in the two pilot regions, but SESPAS support and enthusiasm for the system resulted in it being used nationwide in preparation of the 1988 budget.

d. Accounting.

Procedure manuals for the routine operation of the accounting system have been developed and include the following:

1. - Organization and Functional Structure of the General Directorate of Finances (Now the Directorate of Administration)
2. - Organization and Functional Structure of the Office of Internal Auditing
3. - Procedure for the Control and Auditing of Hospital Subvention Accounts
4. - Procedure for the Control and Internal Management of Checks at the Central Level
5. - Procedure for the Control and Internal Management of Checks in Health Facilities
6. - Procedure for the Preauditing, Accounting for Encumbrances and Fund Disbursement at the Central Level and in Health Facilities
7. - Procedure for the Registry and Control of Authorized Signatures
8. - Procedure for the Control, Management and Establishment of Petty Cash Funds at the Central Level
9. - Procedure for the Management and Control of Petty Cash Funds in the Health Facilities.

The manuals and procedures are being gradually implemented through training of Regional Directors and Administrators and health facility directors and administrators at the central level and in each health region and area. To date, training programs have been carried out in four regions and the central level, involving some 200 people. In addition, the functional and structural reorganization of the General Directorate of Finances has been carried out.

Also, a procedure manual for fiscal operations related to personnel has been drafted. It includes (among other things), the computerization of records for controlling authorized positions and employee payment records. Also included will be the process whereby the Personnel Department will notify and coordinate all personnel transactions with the General Directorate of Finance and all SESPAS programs, subprograms and activities; the establishment and control of attendance records and the control of disciplinary actions; and the payroll review process.

The fourth and fifth procedures mentioned above have not been fully implemented due to the delay in the production of the necessary forms (signature and identification cards). The delay in delivering computers has impeded full implementation of the sixth procedure.

Financial report models which will be produced by the computerized system have been designed and approved.

Extremely important financial control mechanisms have been put in place at the central level, including the establishment of a department which conducts preauditing of documents to assure completeness, accuracy, and legal compliance prior to transmittal to the General Controller's Office at the national level, the establishment of a Treasurer's Office separate from the function of preparing, reviewing and approving disbursement documents and reconciling bank accounts; the establishment of a system for obligating funds prior to making purchases; and the establishment of a separate and central point for the receipt and dispatch of documents, thereby freeing employees from the constant interruption of people in their office seeking the solution of individual problems.

At the regional and health establishment level, similar procedures are being implemented which will vastly increase control and management of funds.

This will constitute a second key element which, with the budgeting process, will provide SESPAS officials with the tools for improved resource management.

### c. Cost-Accounting.

This will be discussed under goal No. 4 below.

2. Establish a single procurement/payment voucher system whereby funds to pay for purchases are identified and reserved before the procurement is made.

This project output has two elements, the establishment of a single procurement/payment voucher system and the establishment of a process for identifying and earmarking funds prior to purchasing. It appears that GODR regulations do not permit the establishment of a single document for both procurement and payment and therefore that aspect of the output is not achievable within the time frame of the Project. However, a mechanism for the prior reservation of funds, has been established and is covered in the "Procedures for the Preauditing, Accounting for Encumbrances and Fund Disbursement" manual mentioned above. Due to lack of computers, however, the manual has not yet been implemented.

3. Establish effective linkages with the Personnel Division so that personnel transfers and terminations are communicated to the Payroll Office in time to stop the issuance of payroll checks.

This has been largely resolved through the new budget procedures, which have facilitated the preparation of monthly payroll lists by program, subprogram and activity. The payroll is prepared by the General Controller's Office and sent to the SESPAS financial division for review on a monthly basis. At that time additions, removals and transfers which were not previously recorded are noted and reported to the Controller's Office so that the next month's payroll is adjusted and corrected. Meanwhile, once the checks for the present month are received from the Secretariat of Finance they are rechecked versus the previously adjusted payroll copy, and the improper checks received are cancelled and returned to the Secretariat of Finance, through the Comptroller's Office. Once the procedure manual concerning personnel actions

is completed and implemented, the system should be even more rapid and precise because it will be computerized. In addition, the computerized system will permit the preparation of copies of the payroll broken down to regional and health facility level. This will save time by eliminating what is often a full day's labor for the administrator, who currently prepares them by hand.

4. Establish a cost accounting system that shows the costs of providing services in different types of facilities and makes this information available on a regular basis to the Management Information System.

The manual for operating of a cost-accounting system has been developed and is currently circulating in SESPAS for review prior to being presented to the Project Coordinating Committee. The system will initially be implemented at the hospital and sub-center level with approximately five to eight cost centers, depending on the size and complexity of the unit. The implementation of this system will be another piece in SESPAS' armamentarium of tools for measuring productivity and efficiency and thus aiding in resource allocation.

5. Provide monthly summaries to the MIS of the budget's status by program, subprogram and activity.

The budgeting and accounting procedures for accomplishing this are in place but implementation depends upon the receipt of the computers and software currently being purchased by USAID.

6. Provide information on a monthly basis of the flow of funds to the health regions and local level.

For many years, SESPAS has known, on a monthly basis, the flow of funds to health regions and establishments. However, SESPAS does not know or record the detailed breakdown of the lump sum disbursements of those funds. Once the computers, are in place the procedures outlined in the procedure manuals for the management of hospital subvention funds will permit a detailed breakdown of the expenditures by establishment, so SESPAS managers will know what those funds have been spent on and can compare the spending patterns of facilities.

7. Establish an accounting system that would permit selected health facilities to experiment with implementation of a user fee/cost recovery program.

Despite a history of wide spread use of user fees prior to 1986, this output has been stymied by a current SESPAS policy which prohibits user charges in its facilities. It is understood, however, that in light of the current financial crisis, this policy is being reevaluated.

## B. Information Systems.

1. Conduct an inventory of information that key decision-makers need, identify the sources of the information and identify the information that is presently available.

This was done in two steps in two different workshops at the end of 1986. There have been 11 forms which have been identified as critical. These forms are:

- Hoja de consulta externa
- Formulario de Admision and Egreso
- Programa de Control de SIDA
- Informe general de enfermedades de notificacion obligatoria
- Informe mensual de la clinica rural
- Resumen mensual de actividades de promotores de salud
- Informe mensual de vacunacion
- Nacidos vivos - defunciones
- Nacidos muertos - defunciones
- Resumen mensual de salud buccal
- Actividades de saneamiento ambiental
- Consulta y Hospitalizacion

The most important of these is a new form (designed under the Project) called the "Hoja de Consulta", which contains key service and morbidity and mortality data. It will eventually supplant one or two forms which are currently in use, but at present is being used in addition to them. In addition to having redesigned or revised the eleven most critical forms, the Project has seven others ready for review. So far, the new forms have only been completely implemented in Regions I and II; training, materials and equipment are required in the other regions in order for the forms to be implemented there. The strategy is to take the new forms to the regions and train statisticians at the regional, area and health facility level. Each area will compile data at its level and send it to the regions. Regions will compile data by area and send it to the national level, which will compile data by region. New personnel will not be needed to implement the system.

Principal problems have included the resignation in 1987 of two key counterparts, the head of informatica and the head of the computer unit, for economic reasons and because of dissatisfaction with their positions as a result of the SESPAS reorganization. Another factor which has interfered with project development is that there have been other priorities that have diverted the attention of key counterparts, occasionally these priorities are generated by pressure from other international donors. Other problems have been the delay in the delivery of the computer equipment ordered by AID and a series of strikes and community disturbances which delayed training and consumed counterpart attention and time.

2. Prepare manuals and protocols that list the information to be included in the MIS for collection and dissemination.

This output has been achieved to the extent that the information to be included in the management information system has been defined and the system for information collection has been elaborated. A manual produced some years ago which unifies the information system exists, but it is outdated. Instructions regarding the preparation of individual forms have been prepared and many of the forms with their instructions are found in the Plan Nacional de Supervivencia Infantil (PLANSI). SESPAS program managers expect that a manual will be produced prior to the current end of Project.

3. Drawing upon data from the areas of epidemiology, financial management and personnel, the MIS will report regularly on the utilization rates of facilities by type and geographic location showing their relative efficiency based on inputs and outputs and overall reduction of common diseases.

The initial steps for achievement of this output have been taken and are in place. These include the use of the "Hoja de Consulta", which will provide basic epidemiological and outpatient service statistics at the individual patient and service provider level. The "Hoja de Consulta" will also serve as the raw data for future audits of the information system to assure data accuracy. The accounting and budgeting systems will permit the establishment of financial information data banks. Two key elements are still missing, however, for the full achievement of this output. One is the implementation of the cost accounting system, which is the crossing of service and financial data in such a way that unit costs can be determined for various services at any given level. The other is the installation of computer hardware and software that will permit the electronic manipulation of the various data banks to provide that information. One IBM PS2 computer will be put into Regions I and II, respectively, and four will be put into the central level (one each in personnel, information, accounting and the computer center).

4. Provide data on potential health problems facing the D.R. based on key disease surveillance programs for malaria, dengue and schistosomiasis among others.

Basic epidemiological data will be provided by the "Hoja de Consulta" which lists some 90 specific diagnoses which are pre-coded and simply circled by the physician at the close of the consultation. Special new forms have been developed for the three specific programs mentioned above and are in general use nationwide.

5. Provide data on key health indicators including malnutrition, infant mortality and maternal mortality, among others.

The information system as designed will report on a number of key health indicators such as number of vaccinations, vaccination coverage, disease and age specific death and illness rates, etc. It is quite likely, however, that it will not be very effective at reporting malnutrition and there is some question about its ability to calculate infant mortality rates accurately. In the first place, malnutrition does not appear as one of the 90 specific disease categories on the "Hoja de Consulta". Therefore, if the physician

makes the diagnosis he has to write it in by hand in the 'Other Diagnoses' category. Secondly there is probably low priority given to identification of the problem by SESPAS, given its limited ability to deal with the problem. Infant mortality rate calculation presents a different problem. It is not known how much underreport of infant deaths occurs. Often children who die within the first few weeks or months of birth are not reported to the vital registry system, particularly if they die at home. Nevertheless, SESPAS officials state that recent health surveys have calculated infant mortality rates that are very close to those calculated based on SESPAS statistics.

#### 5. Other Outputs.

Other outputs have been achieved that were not specifically mentioned in the Project Agreement, including the training of large numbers of SESPAS staff in statistical materials, the provision of basic equipment and improved integration of information providers and users. The latter has resulted from the inclusion of representatives from the Information Unit and the Computer Unit on the Project's Coordination Committee thereby heightening awareness by each of the other's needs and limitations. Regional and health facility staffs in the two Pilot regions of Bani (Region I) and Santiago (Region II) were trained in basic statistics, clinical history and the use of the "Hoja de Consulta". Physicians were trained in codifying mortality and morbidity. Calculators, a basic necessity for anyone responsible for providing statistical information have been purchased for all health establishments and regions.

#### C. Personnel Systems

##### 1. Provide an inventory of all direct hire persons in SESPAS by region and facility.

This type of inventory has been available in SESPAS for many years. A card file is maintain in the payroll office, where the name and salary of each employee is kept by facility and region. The utility of this data, however, will be greatly augmented with the installation and operation of computers, permitting greater manipulation of data which now is maintained manually.

##### 2. Provide procedure manuals for central and regional level administrative offices on how to handle the most common personnel functions.

Three basic manuals for the operation of the personnel system are said to exist. These manuals are: "Recruitment, Selection and Hiring of Personnel", "Personnel Performance and Programming" and "Registry, Control and Information on Personnel Issues". The first manual, which provides a good basis from which to start, is currently under revision by the Project Coordinating Committee's subcommittee on personnel. The second manual contains very subjective criteria and will have to be rewritten almost entirely. Copies of the third manual cannot even be found. It is anticipated that the manuals will be completed by the end of the project.

3. Together with the payroll issuance of the Financial Management Division, project the personnel costs by facility.

This is a natural outgrowth of output number one and it has been obtainable manually for many years. Once computerized, it will permit personnel costs to be crossed with other data, such as number of patients seen, to obtain efficiency indicators.

4. Develop guidelines for personnel supervision and work performance standards.

The achievement of these outputs depends upon the timely approval of the personnel policy and restructuring of the Personnel Office. There are several reasons for this. First, it is the opinion of the advisors and SESPAS personnel staff that the manuals have to be the outgrowth of certain more fundamental changes involving the restructuring of the Personnel Office, transforming it from a simple paperwork processing station into a real tool for personnel management and involving the development of a personnel policy which defines what SESPAS expects out of its personnel system. Once these two fundamental preconditions have been achieved, the goal of training and developing supervisors and introducing work performance standards can be pursued.

5. Other outputs.

A personnel policy is being developed and implemented. Among other things it enunciates such policies as: recruitment based upon suitability for the job, the responsibility and right of supervisors to be consulted on who will be hired to work under them, the right of the supervisor to initiate promotion and disciplinary actions, the concept of "equal pay for equal work" and the concept of restructuring the personnel division so that it can implement personnel policy. The policy is currently under discussion with SESPAS officials. An outgrowth of the personnel policy will be the development of regulations which expand upon and operationally define the policy. The manuals will flow from the policy and regulations. SESPAS and Clapp and Mayne advisors have met and agreed upon a course of action for undertaking a restructuring of the personnel system. The structure being proposed would leave in place the current paperwork processing unit of the Personnel Office, but would add a position classification and wage administration unit, a Human Resources Development and Training Coordination Unit and a Recruitment, Selection and Utilization Unit. These units are necessary in order to implement the personnel policy as designed. The personnel policy and personnel unit restructuring will be likely project outputs during the current life of project.

## 3. Other Outputs.

### 1. Improved Interoffice Coordination.

One of the most important unanticipated outputs of the project has been improved interoffice coordination. This has resulted from the critical role performed by the Coordinating Committee in project implementation. The committee was the outgrowth of initial consultations with SESPAS staff, in which the results of the initial analyses were discussed and work plans developed. Counterparts saw the need for a mechanism by which SESPAS staff and leadership could be kept abreast of project development and implementation problems. A committee was established chaired initially by the Vice-Minister for Administration and, subsequent to SESPAS restructuring by the National Director of Health, also Project Coordinator. The committee, which meets approximately once per month, brings together executives and key counterparts from the Directorate of Health Systems, Directorate of Human Resources, Directorate of Administration and Directorate of Rural Health. It has provided a forum for not only discussing project activities, but for the improved integration and coordination of SESPAS activities in general. It has played a key role in facilitating project implementation.

### 2. Restructuring of the Directorate of Health Systems.

As a result of the discussions concerning budget preparation, it became apparent that it would be necessary to restructure what was then the Planning Subsecretariat. The Directorate of Health Systems was developed and, among other things, the programming and the budgeting offices were grouped under one director, thereby reinforcing the principal of the interrelation between the two. Also the information and computer offices were brought into the division, thereby encouraging the use of information for management purposes.

## IV. DESCRIPTION OF REFORM PROCESS.

### A. Description of Process.

The Project Paper anticipated five phases beginning in October, 1985. The contract with Clapp and Mayne, however, was not signed until August, 1986 and the contractor did not begin work until October, 1986. At that time, the project was to be implemented in three phases. The first, from October, 1986 to January, 1987 was dedicated to intensive study of each of the three principal management areas - finances, information systems and personnel. That process involved in-depth discussion with SESPAS counterparts, the preparation of analyses and position papers and workshops with central and regional personnel from the two pilot regions, Bani and Santiago. The result of that workshop was the development of work plans and the establishment of the coordinating committee. With regard to institutionalization, it is important to note that from the outset there was a heavy emphasis on the active participation of SESPAS officials and a sincere effort to tailor activities to their needs. More than one official has noted that the technical advisors were different from other advisors they have had in that they did not work in isolation. It is also worth noting the serendipitous conjunction of project start-up with the arrival of the new government administration (which entered office in August, 1986). The project provided new officials with a powerful tool for undertaking reforms. This was

particularly noteworthy in the area of finances, where the new director was a senior and experienced GODR finance official, knowledgeable about what needed to be done and desirous of improving SESPAS financial operations.

The second phase, implementation, is underway: it is scheduled to last from February, 1986 to September, 1988. The pattern of implementation of reforms has been fairly uniform in each of area and has been carefully governed by the detailed work plan prepared by SESPAS and Clapp and Mayne. The work plan is updated quarterly and has been used as a management and planning tool. The reform process works as follows: first, based upon earlier and subsequent discussions, advisors prepare a draft manual, policies or procedures, depending on the reform involved. The manual/policy/procedure is then discussed with the SESPAS subcommittee corresponding to the area involved. During the review of the document, input is obtained from the pilot regions. Once all revisions have been made, the document is formally presented to the Coordinating Committee for discussion and approval. At that level, input is received from offices that are not directly involved in the development of the policy, but may well have to live with its implications. After incorporating any recommended changes, the document is sent to the National Director of Health and then the Secretary of Health for final approval.

Once approvals have been received training is conducted. In the budgeting and accounting areas, training at the regional level has involved facility directors and administrators. This will increase the likelihood that reform will be sustained over the long term, given that directors are traditionally retained during changes of government. Following training, evaluations are conducted.

During phase III reforms are supposed to be supervised and consolidated. However, this phase has not yet been budgeted nor programed.

#### B. Recommendations.

We have no recommendations to make regarding the reform process. "If it's not broken, don't fix it" applies in this case. A significant number of important reforms have been carried out with relatively little pain over a short period of time and we believe that all parties are to be commended for this accomplishment.

### V. INSTITUTIONALIZATION AND SUSTAINABILITY OF REFORMS.

#### A. Institutionalization.

Institutionalization is defined as the incorporation of new procedures or strategies into regular institutional operations and the identification of the institution with those procedures or strategies. There is no doubt in our mind that the new accounting procedures have been successfully institutionalized. The new procedures correct serious deficiencies, respond to institutionally defined needs, are enthusiastically embraced at the central level and are supported by written and approved manuals and procedures. By the end of the project, all SESPAS personnel responsible for implementing the new procedures will have been trained. Once the system is fully computerized, which should occur at the central level by the end of

project. Institutionalization at the central level should be complete. The extent and success of institutionalization at the periphery is still too early to judge and may depend to some extent upon the capability of the institution to supervise its facility administrators.

It will be more difficult to institutionalize the budget process, because it is less routine and relies to a much greater extent on the exercise of judgement and creativity. Nevertheless, the production of manuals, a second round of training at the regional level and a second round of budgeting (all of which will be carried out under the Project) will all contribute to institutionalization. An extremely important factor, however, will be the degree to which the new process is considered useful by SESPAS staff. If it develops into a real mechanism for redistributing resources according to needs and productivity, then institutionalization is likely. If this does not occur, then the process may well be overturned when the winds of political change begin to blow.

Reforms in the information system are in many ways less profound than those that have occurred in the financial area. The major reform is perhaps a greatly expanded vision of the information system as a management tool. The use of "Informatica" as the point of convergence of the financial, personnel, service statistics and mortality/morbidity data banks is a new concept whose utility will not truly be appreciated until the computers and their hardware are installed. If the system functions as envisioned, then its utility should be a strong factor in promoting its institutionalization. Less transcendental reforms, such as the revision of forms and the training of personnel also contribute to this process. The fact that only two of the eight regions will have computers may discourage institutionalization, since it will be difficult for SESPAS to maintain dual system over the long haul.

In the area of personnel, too little has been accomplished to make a judgement on the institutionalization process. Certainly the production of the contemplated manuals will be an important element, but probably by itself insufficient to produce lasting change in personnel practices. SESPAS' success in implementing the personnel policy, in developing and implementing personnel regulations and in restructuring the personnel department will be an excellent indicator of its commitment to personnel reform.

## B. Sustainability.

### 1. Factors governing institutionalization based upon Honduran and Guatemalan experience.

AID/Washington's Policy and Program Coordination office (PPC) has financed and carried out two sustainability evaluations in Latin America, one in Honduras in 1986 and a second one in Guatemala in 1987. Both of the evaluations looked at US Government funded health projects over the last forty years in an attempt to see what has been sustained and what has not and the factors which seemed most likely to lead to sustainability.

The conclusion section of the Guatemala evaluation states the following:

"There is clear evidence that significant activities and benefits from the U. S. supported health projects in Guatemala over the last forty-five years have been sustained. This evaluation has shown that some contextual factors and project characteristics are related to project sustainability.

Contextual Factors:

"Contextual factors which appear to be most important for project sustainability were:

"1. National Commitment: Projects which pursued goals which were priority goals of the national government and for which there was general consensus among significant groups in the health sector were likely to be sustained.

"2. Characteristics of Implementing Institution: Implementing institutions which were fragmented, had low skill levels, and/or conflicting organizational goals, were less likely to implement sustainable projects.

"Project Characteristics

"Project characteristics which were important for sustainability were:

"1. Project Effectiveness: Projects which had a reputation for effectively achieving appropriate health goals were more likely to be sustained than projects which were not viewed as successful.

"2. Institutional and Managerial Characteristics: Vertically organized projects are less likely to be sustained than those which are integrated into the normal administrative structure of the implementing agency. Projects with stable and highly qualified management both within the implementing agency and from AID are more likely to be sustained.

"3. Financial Characteristics: Projects which provide for progressive absorption of recurrent project costs by the national budget are more likely to be sustained.

"4. Content Aspects: Projects which provide significant training at either the professional or paraprofessional level are likely to be sustained - especially if there are good employment prospects for the graduates. Projects with enduring technical assistance are also more likely to be sustained.

"5. Project Negotiation: Projects which were negotiated in a mutually respectful process in which a consensus over goals, activities and implementation plans is established are more likely to be sustained than those which appear to be imposed by AID."

That same study outlined four policy implications which are of particular importance in the design and implementation of sustainable projects:

1. Respect for national priorities and for national involvement in project design.
2. Enhancement of the administrative effectiveness and capacity of the implementing agencies and integration of project activities into those institutions.
3. Design of project financing to encourage national absorption of recurrent project costs during the life of the project.
4. Attempt to design and implement projects to assure that they will be viewed as effectively achieving health goals.

## 2. Application to Health Management Systems Project

### a. Factors favoring sustainability

If we look at those criteria in terms of the Health Systems Management Project there are a number of very encouraging signs. In terms of national commitment there is certainly no doubt about the commitment of the current SESPAS leadership to project goals. This is seen in terms of the easy access to policy makers, their active and generally timely participation in problem resolution and the time they put into project implementation through meetings and work sessions.

The characteristics of the implementing institution (SESPAS) show certain positive signs. There is a uniformity of organizational goals - improved health care and a clearly defined organizational structure. Skills at the upper management level are also relatively high. Skill levels at lower but key positions are, however, often inadequate.

This project has a well established and well deserved reputation for project effectiveness. This is seen in the significant reforms which have been introduced and institutionalized in a very short period of time.

Two institutional and managerial characteristics bode well for sustainability of the project - the integrated nature of the administrative reforms and the stability of key AID and SESPAS positions. The issue of verticality versus integration has never really been a project issue. Since the systems being designed affect every aspect of SESPAS operations on a daily basis, they are the very essence of integration. Also the existence and functioning of the Coordinating Committee, expressing as it does such a variety of SESPAS offices and programs, contributes to project integration. The stability of SESPAS and AID leadership during the life of the project has also been important. Key SESPAS managers have been in place since the inception of the project and, barring some unforeseen circumstance, will be in place for at least another two years. Many of the individuals have worked for SESPAS through a number of changes of government, which also lends to stability. The fact that a single AID Health Officer has been in place since the time of project design and will possibly be in the Dominican Republic for another year or two demonstrates the stability on AID's side. The Project manager has also been in place for three years.

The financial characteristics of the project are also conducive to sustainability since reforms made under the project will have minimal recurrent costs.

The content aspect of most significance is technical assistance. As stated above, long term technical assistance is conducive to sustainability. As stated in the Guatemala evaluation, "The evidence on technical assistance suggests that technical assistance that is either long-term as in the SCISP period or is periodic over a long period is conducive to sustainability." The Health Systems Management Project which provides one permanent long term advisor and three consistent short term advisors, has the best of both worlds, the advantage of continuity and follow-up with the long term advisor and the efficiency, in terms of cost, of short term advisors.

The project negotiation aspect of project design and implementation also contributes to the likelihood of sustainability. It is clear that this is not a project which AID thrust upon SESPAS, but rather was designed in the same way that it is being implemented, in an atmosphere of mutual respect and mutual interest in the attainment of the project goals.

#### b. Factors discouraging sustainability

According to the Guatemala evaluation administrative, systems were much less likely to be sustained than were training or infrastructure programs. Massive turnovers of key officials, especially technical officials contributed to the undermining of certain projects.

The Guatemala document makes the following observation "Low skill levels within the implementing agency clearly undermined sustainability and high skill level favored sustainability." While SESPAS technical officers appear to have quite high skill levels, lower level personnel do not. This could be a serious constraint to sustainability. In addition, almost all SESPAS technical personnel are strikingly underpaid, posing the constant threat of abandonment to the private sector should the opportunity present itself. The limited number of opportunities in the private sector and the number of skilled professionals, however, somewhat mitigate the threat of this problem. A more real problem is the nature of a personnel system that permits statisticians to be hired that do not even know how to calculate an average and that permit relatively unskilled administrators to be appointed and almost certainly replaced every four years. One key positive factor, however, is that facility and regional directors appear to be stable from government to government. Since they have been involved in project development and training, they provide at least one fairly constant cadre of professionals.

#### c. Impact of personnel turnover and training.

##### (1.) Data demonstrating nature of problem.

There is considerable apprehension on the part of international donors regarding the negative impact on projects of the GODR's chaotic personnel policy. Chief among the complaints are the massive turnovers which occur every four years with the change in government, whereby international donors see the personnel they have trained and the systems they have attempted to

establishment swept away through massive personnel changes. They also see what appears to be a disregard for the quality of personnel hired, whereby political considerations appear to predominate over technical ones. In the case of AID, the mass firing of over 5,000 promoters which had been the cornerstone of two earlier AID projects extending over some ten years was particularly traumatic. We have attempted to try to get a handle on data which would show the true nature of the problem. The limited amount of time available and the enormity of the SESPAS payroll, over 40,000 employees, means that our investigation was of necessity superficial. Nevertheless, we believe that we have a general appreciation of the problem.

The process of designing and implementing reforms under the Health Systems Management Project has involved SESPAS personnel at three levels - Central level technicians, Regional level professionals, and facility level professionals and paraprofessionals. We have gathered some information on the longevity of each of these.

(a.) Central Level technicians:

At the Central level, the project has worked principally with the Directorate of Health Systems (where budgeting and information functions are located) and the Directorate of Administration (where accounting and personnel functions are located).

The principal counterparts and their length of service in SESPAS are as follows:

<u>Position</u>	<u>Time with SESPAS</u>
Director of Health Systems	15 years
Director of Informatica	10 years
Deputy Director of Informatica	22 years
Head of Computers	22 years (1)
Chief of Budget and Programming	3 years
Chief of Programming	2 years
Chief of Budgeting	11 years
Director of Administration	2 years (2)
Chief of Payroll	14 years
Chief of Treasury	8 years
Chief of Budget Execution	3 years
Chief of Hospital Accounts	12 years
Chief of Cash Accounts	3 years
Chief of Document Review	11 years
Chief of Personnel	2 years

(1) Left SESPAS for training and has been back for three months under contract

(2) Over 20 years working with GODR in General Controller's Office

It is apparent that at this level there has not been a significant problem with personnel turnover. These are also key personnel in terms of the sustainability and institutionalization of the management reforms introduced under the project, because they set the norms and procedures which govern the functioning of the system at lower levels.

#### (b.) Regional Level Technicians:

We only visited two Regions, No. 1 in Bani and No. 2 in Santiago. In Region 1, the Director has worked two years with SESPAS, although he had the same position when the current ruling party was in power ten years ago. The Statistician has worked for two years and the Administrator for seven years. In Region 2 the Director has worked in SESPAS as Director of Region 2 for seven years and the Administrator for one year. Our impression from talking to these persons as well as to the personnel office in Santo Domingo, is that technical personnel such as Regional Directors and Chief Statisticians, who are university professionals with statistical training, are not changed at the time of changes in government. Administrative personnel are more likely to change as are the lower level technical personnel such as auxiliary statisticians.

#### (c) Health Facility Level Professional and Paraprofessionals

At the health facility level professionals, such as the facility director and physicians, nurses, laboratory technicians, etc., do not change. Paraprofessionals, such as administrators and statistician auxiliaries are almost uniformly changed.

In summary, it appears that the backbone of the administrative system at SESPAS stays intact during changes in government, while lower level personnel, largely responsible for implementation of reforms and procedures are changed. The exception, and an important one for the purposes of this project, is the facility director who appears to be relatively stable.

#### (2.) Impact of Personnel Turnover

Based on the above, we conclude that personnel turnover is not a major threat to the long term sustainability of this project. It can be anticipated that the entire system suffers a periodic decline in efficiency as new personnel are incorporated every four years at the lower levels, but given that their supervisors are acquainted with most of the new procedures, there is some continuity even at that level. The most serious disruption is potentially in the statistical area, where directors have not received much training. Nevertheless, the statistical system is based upon the various forms which have to be filled out, filed and sent on to higher levels for analysis, and these forms remain constant. As noted above, central level technicians are perhaps the most constant body of employees in SESPAS and they are really the key to the longevity of reforms.

#### 2. Conclusion on Probability of Sustaining Reform

Based on the above, we believe that the factors favoring the sustainability of reforms instituted under the Health Systems management project outweigh those undermining sustainability and that it is likely that reforms will far outlast the period of project inputs. Particularly important are the recognized effectiveness of the project, the integrated nature of project implementation, the high degree of institutional support for the project and

the absence of onerous recurrent cost implications. Also important will be the mechanization of systems and the existence of manuals, widely distributed, governing the operation of the systems. Personnel turnover, while an inconvenience, will not be a major impediment to sustainability.

## VI. ADDITIONAL MANAGEMENT SYSTEMS REQUIRING REFORM.

This section focuses upon areas previously identified by SESPAS and USAID/Dominican Republic as potential areas for project involvement, i.e. purchasing and supply, maintenance and transportation. We also look at project expansion within the current areas of concentration (finances, personnel and information systems).

### A. Purchasing and Supply.

#### 1. Description of problem

Currently 8% of SESPAS budget of RD\$ 274,000,000 is budgeted for the procurement of supplies, equipment and medications. An additional approximately RD\$ 120,000,000 is allocated to PROMESE, Programa de Medicinas de SESPAS, directly from Presidential funds. An additional amount is budgeted under a IDB project for the procurement of supplies and equipment (to be procured directly by IDB).

It is not easy to get a hold on the SESPAS purchasing system. Nevertheless, there appear to be five basic subsystems. One is operated directly by the health facilities and regions through the use of their monthly subvention funds, a second is by purchase orders issued by the Purchasing and Supply Department of the General Directorate for Administration, a third is the system of rotating funds set up for three specific programs - maintenance, transportation and Acquired Immunodeficiency Syndrome (AIDS), fourth is equipment procurement and the fifth one, operated out of the office of the Secretary or Sub-Secretary of Institutional Coordination is drug procurement. Each of these is discussed in terms of the basic elements of a supply system, i.e. programming, purchasing, storage, distribution and evaluation/control.

The following, taken from an earlier Management Science for Health (MSH) study of the SESPAS logistics and supply system, sets the conceptual framework for a coherent supply system. The logistics process includes the following activities:

1. Programming, which forecasts supply requirements, taking into consideration existing stocks, historical consumption patterns and service delivery goals. The forecasting of needs should determine when and where supplies will be required. Programming should include consideration of the availability of financial resources, which sets a limit on the overall quantity of supplies that can be purchased.
2. Procurement involves the acquisition of the supplies which programming has identified as necessary. The procurement process should involve an attempt to minimize expenditures while assuring the availability of supplies of adequate quality and sufficient quantity.

3. Storage of procured supplies is usually required at one or more centralized locations. Centralized storage enables the ultimate distribution to service delivery points to be more responsive to local consumption patterns.

4. Distribution attempts to achieve the cost-effective delivery of the procured supplies to the health facilities where they will be consumed or delivered to patients.

5. Evaluation and control should be based on a comprehensive logistics information system, which routinely analyzes data on the performance of the four other activities to determine if performance is within established norms. The control function uses data from the information system to assure that the supplies are not misused.

The first four activities are sequential, each one depending on the timely performance of the activity immediately preceding it. Thus, for example, timely procurement depends on timely receipt of programming information that defines the specifications and quantities of the supplies to be procured. A comprehensive logistics information system should generate the information logistics system managers require to effectively coordinate the other four activities, as well as to assure outside auditors that the financial resources and supplies have not been misused.

Logistics and supplies constitute a management subsystem that supports the rest of the health delivery system. An effective logistics subsystem is essential to an effective health delivery system. By way of example, lack of medicines at rural health clinics is associated with a drop in clinic utilization.

#### a. Regional and Facility Level Purchasing.

Each Health Region, hospital and sub-center receives a monthly subvention. In 1988 this amounted to RD\$ 21,282,900 or 8% of the overall SESPAS budget. Four per cent is supposed to be earmarked for facility maintenance, 50% for medications, 30% for food and 15% for other purchases. This distribution, while still the official regulation is honored more often in the breach since the rise in medication prices and constant shortages led to a governmental decision to purchase medications with extra-budgetary funds. This has not resulted in greater purchasing power on the part of the regions and health facilities, however, because inflation has consumed the excess which previously went for medications. The biggest budget item is typically food for inpatients. Also, out of this item come supplies, gas, per diem and maintenance. Any equipment purchases require prior approval by the central level. Most purchases are done on credit, since the subvention for the month is not received until the end of the month.

There is no formal purchasing program developed at the facility level. However, the new budgeting procedures assist in establishing regular monthly estimates of needs. Procurement procedures are straightforward and relatively simple and by the end of the current Health Systems Management Project all personnel will have been trained. Since purchases are made on a monthly basis, storage and distribution are not problems. Evaluation is done through periodic audits performed by the Regional Auditor.

b. Purchasing by the SESPAS Purchasing and Supply Department.

Relatively small item purchases made by central level officials are obtained through the Purchasing and Supply Department. Purchases are presented without any previous programming on an ad hoc basis either directly to the department or through the Office of the Secretary or that of the Sub-Secretary. The Department Chief obtains three quotations and prepares a purchase order which is then sent to the Finance Office to see if funds are available. If funds are not available, a decision is made as to the urgency of the purchase. If it is considered urgent, an attempt is made to purchase on credit. If the purchase is made on credit, the purchase order is returned with the bill to the Finance Office. If funds are available, the purchase order is forwarded to the budget office for approval, and is sent to the General Comptroller's Office for fund approval and then to the Treasury for the issuance of a check. Approximately RD 700,000 of purchases are made per month in over one hundred individual purchases. The Office currently has an outstanding account of RD\$500,000 to RD\$ 700,000 with creditors and some accounts are more than five months old. The financial difficulties are compounded by the fact that the monthly allotment of funds budgeted for SESPAS is not always available due to revenue shortfalls at the Central Government level. When funds received are less than budgeted, purchasing often suffers since it is not part of SESPAS' fixed costs as are salaries and certain other line items. The funds available for purchases actually constitute slightly less than 10% of the SESPAS monthly allocation.

Commodities are delivered to one of two SESPAS warehouses depending on whether it is supplies or equipment. Both warehouse are small, but considered to be adequate given the fact that items generally spend very little time in the warehouses. Both warehouses have inventory control procedures and are submitted to regular SESPAS audits.

Serious control and evaluation problems exist. The obtaining of quotations and the actual purchase are concentrated in one office. This is inadequate from a financial control standpoint. Secondly, there is no receiving report which returns to the Finance Office, so there is no central record to indicate that what has been received is what was ordered and what was paid for.

c. Rotating Fund Purchases.

As mentioned above, Maintenance, Transportation and the AIDS Program have rotating funds of approximately RD\$ 25,000 per month. In addition, the Transportation Office has an additional RD\$ 18,000 monthly for the purchase of gasoline and oil for central level vehicles.

Programming of purchases by the Maintenance and Transportation Offices are also ad hoc and depend on demand. There is no attempt to maintain a stock of spare parts, partly because of fund shortages and partly because of the lack of standardized equipment. Procurement itself is relatively expeditious because the personnel of the departments involved obtain the quotations which they present directly to the Finance Office. Once it is ascertained that funds exist in the accounts, checks are issued by the SESPAS Treasury Office. Because of the small quantities involved, distribution and storage are not problems. Nevertheless, the same control deficiencies exist as those mentioned above.

#### d. Equipment Purchases.

Equipment is purchased directly by the Office of the Secretary utilizing funds from an open-ended Presidential account. Regions, hospitals and subcenters send requests directly to the Secretary. Judgement is passed on the need for the requested item. If approved a contract, rather than a purchase order is used. This is because it is frequently hard to get three quotations for this specialized equipment, stocks are often not present in country and per unit costs are often quite high. There does not seem to be a systematic programming of equipment needs. Once purchased, equipment is entered into the SESPAS equipment warehouse from which it is dispatched to the health facility.

#### e. Drug Purchases.

The fifth category of purchases are medications made out of the Secretary's office through PROMESE. Medications appear to be the only products which are purchased through a competitive bidding process and most are purchased through PROMESE. Currently PROMESE expends approximately RD\$ 10,000,000 per month in the purchase of some 226 essential medications and additional supplies such as surgical gloves, tape, gauze, etc. Medications not included on the list are bought on an ad hoc basis as need arises and after an analysis of need is carried out. Programming is done based on a request for needs from PROMESE to the various facilities and based on requests from the warehouse which, in turn, prepare them based on current inventories and demand from the hospitals and subcenters.

Procurement of medications is through an open bidding process with award decided by a committee composed of the Director of PROMESE, the Secretary of Health and the Sub-Secretary for Intersectoral Coordination. Once an award is made, a contract is prepared by the Legal Office and sent to the Office of the President for processing.

PROMESE has three warehouses, one for hospitals and subcenters, one for rural clinics and one for the popular pharmacies. The hospitals and subcenters come to the warehouse monthly and are given medications on demand. Given the frequency of purchases and the relatively rapid turnover of product, there is not currently a storage problem. As mentioned above, hospital and health centers send their own vehicles into Santo Domingo on a monthly basis to pick up medications. Studies were done several years ago showing what the procurement pattern for each hospital should be, but actual consumption is way in excess of projections. The cause for the discrepancy has not been studied but is presumed to be increased utilization resulting from a more consistent supply of medications. It is worth noting that recently the supply of medications has been quite good and has resulted, in at least one instance, in a significant increase in the credibility of a SESPAS facility and a subsequent 50% increase in patients seen. Nevertheless, there is still dissatisfaction at the health facility level because of shortages of some medications and overstocking of others. Rural clinics are given a predetermined supply of medications on a monthly basis with disregard to actual needs, shortages or overstocks. Those medications are delivered on a monthly basis by SESPAS to the Regional Office which distributes them to the various centers.

## 2. Constraints.

### a. General Constraints.

There are no written guidelines governing the overall procurement process. The lack of procedure manuals, such as those developed under the current AID/SESPAS Health Systems Management Project, permits sloppy procurement procedures and opens the way for possible abuse such as that which reportedly occurred in PROMESE in previous years.

There is no central procurement office at the Central Level. As mentioned above, procurement at the central level is divided among three different processes carried out by five or six different procuring authorities.

The existence of two large extra-budgetary accounts, one for pharmaceuticals and one for equipment, also distorts the procurement process.

### b. Programming constraints.

One of the results of the improved budgeting process should be improved programming of purchases. Better projections would help eliminate the current delays which occur because of fund shortages and would, perhaps, permit bulk purchasing with considerable potential cost savings.

### c. Procurement Constraints.

The major constraint here is a constant shortage of funds compounded by poor procurement planning. This results in frequent purchases on credit, delays in payment and the gradual drying up of suppliers who will accept SESPAS credit. Another serious procurement problem is generated by rapid inflation in cases where payment is made by check after the processing of a purchase order. During the month to three months from the obtaining of quotations to the final issuance of the check prices have usually gone up requiring the cancellation of the check and reinitiation of the process or resulting in the purchase of a lesser quantity than that which is needed and was requested.

### d. Storage Constraints.

Storage does not appear to present a serious constraint at present, but if a way should be found for carrying out bulk purchases, then additional storage facilities, especially at the central level might be necessary.

### e. Distribution Constraints.

Distribution does not appear to be a critical constraint. The only distribution which relies on the central level is that of medications for the rural health centers. The central level seems to be capable of managing that process.

### f. Control and Evaluation Constraints.

Basic and fundamental deficiencies exist in the Control and Evaluation aspect of the system. This is partly generated by the lack of well defined norms and procedures. As a result, there are no standards against which logistics system performance can be measured.

In addition there is no such thing as a receiving report which enables purchasing audits to be conducted. Inventory control at the facility level is also poor, opening up the possibility for losses.

### 3. Recommendations.

a. Consolidate most of the central level purchasing under a single SESPAS office. This office would have at least three basic subdivisions - one for medications, one for equipment and one for supply. This office should have very close ties with the Directorate of Administration and the Office of the Secretary.

b. Using a process similar to that used for accounting and budgeting, develop procedures and norms to govern the entire procurement process.

c. Develop a methodology which permits bulk purchasing and should generate considerable cost savings.

### B. Transportation.

#### 1. Description of Problem

Transportation is considered by all SESPAS managers to be a critical problem. There is a severe shortage of vehicles. According to SESPAS Transportation Department figures, there are 179 vehicles in the SESPAS inventory. Of these, 82 are ambulances, 25 are assigned to the regions, 48 to the central level and 24 to hospitals or other uses. Only 18 of these vehicles, i.e. 10%, are in good condition, 60% are in fair condition and 30% in poor condition. The Transportation Division, as such, only has three vehicles. All of the other central level vehicles are assigned to specific offices or programs. No such thing as a motor pool exists. The National Director of Health estimates that SESPAS needs an additional 100 vehicles. Forty will be provided under the new IDB project, of which 28 will be distributed to the areas and regions and 12 assigned to the central level. He estimates that an additional thirty vehicles are need for the malaria program and thirty for use by central level personnel. The lack of vehicles severely restricts SESPAS's ability to supervise its programs.

#### 2. Constraints

A budget of RD\$ 18,000 is available each month for gas and oil for central level vehicles. Fuel for regional and facility vehicles come out of their respective monthly subvention. Provision of gasoline is made on a per trip basis and is calculated and provided by the Transportation Division.

Vehicle maintenance will be discussed under the next section.

## 2. Constraints

Excluding maintenance, there are only two constraints to an improved transportation system. The first is the abysmal lack of vehicles, although this will be somewhat alleviated by the provision arrival of forty vehicles by IDB. The other is the lack of a motor pool which makes it difficult to rationally utilize vehicles at the central level.

## 3. Recommendations

a. The purchase of vehicles is probably beyond SESPAS current financial capacity. Therefore an attempt should be made to obtain vehicles from donors, but only after assuring an ability to adequately maintain the vehicles.

b. With the arrival of additional vehicles at the central level, a study should be made of vehicle distribution and use and a motor pool established which can serve the needs of all SESPAS central level personnel. The arrival of additional central level vehicles will necessitate an increase in the fuel and oil allotments.

## C. Maintenance.

### 1. Description of Problem

The objective of a maintenance department should be to improve the delivery of health services by assuring the adequate operation of physical infrastructure, be it buildings, equipment or vehicles.

Maintenance should be performed in three stages, preventive, repair and overhaul.

Preventive maintenance should be performed on a regular basis to prevent the need for repairs. Buildings require continuous preventive maintenance such as replacing broken glass, painting faded areas or replacing damaged wood before further damage is incurred. Equipment needs regular cleaning and the replacement of filters, belts, etc. Vehicles and motors needed regular oil changes and inspections.

Repairs should be made when needed to prevent further damage, improve economy and put equipment back into operating condition. A leaking water line or dripping faucets, not only wastes water but can occasion further damage if not repaired.

Overhauls are usually the result of a failure in the above two processes and are expensive and time consuming. The system should be so designed as to minimize the amount of equipment which needs overhaul.

The current BESPAS maintenance program functions at three levels - central, regional and facility.

a. Facility level.

A fixed, but small percentage of facility funds are designated for maintenance. Although some of the larger hospitals have maintenance personnel, most repairs which cannot be done in house are referred to the regional level, or, more often, to the central level or contracted out to the private sector. This is particularly true of vehicle repairs.

b. Regional level.

Each region has a maintenance office, generally head up by an engineer. Region I, for instance, has one electrical engineer and one carpenter, with unfilled slots for a plumber and an electrician. Region II has one mechanic and one carpenter, with openings for an electrical engineer and a painter. The regions prefer to contract out vehicle repairs which are beyond their capacity, to local repair shops, rather than sending them to the central level where they don't know when or if they will be returned. Regions, as well as facilities, are suffer from an inflation which has pushed the cost of replacement parts up by 100 to 200% over recent years, while their budgets have remained constant.

The preventive maintenance of the three vehicles assigned to the Region I office is contracted to private shops, which works very successfully. They have been able to keep one good pickup, one fair station wagon and one poor station wagon operating. However, the vehicles are not in good enough condition to permit the kind of supervision trips to areas and establishments that are required even for supervision of Health Systems Management Project activities.

There is a lack of tools and adequate spare parts. The craftsmen working at Bani, for example, do not have proper hand tools for carrying out their responsibilities nor adequate facilities in which to work. The electrical engineer does not have a screw driver or tester. The plumber has no tools and the carpenter needs additional tools. We understand, however, that IDB will be financing the construction and equipping of regional equipment maintenance facilities, and this should help alleviate the problem.

c. Central level.

There are three departments responsible for maintenance at the central level: Equipment Maintenance, Vehicle Maintenance and Facility Maintenance.

(1) Vehicle Maintenance.

Vehicle maintenance at the central level is the responsibility of the Transportation Division. The Division has a central vehicle maintenance shop with 18 employees including eight mechanics, six mechanic helpers, one tool room clerk, one warehouse clerk, one office clerk and one secretary. The

shop receives an allotment of RD\$ 25,000 per month for the purchase of spare parts. The general appearance of the central shop is very unfavorable, with dirty and greasy repair stalls, junked equipment scattered everywhere and inadequate parking for vehicles needing repairs. There are currently 31 ambulances and four other vehicles in the shop for repairs.

One of the chief problems encountered is the lack of spare parts. In the first place the budget of RD\$ 25,000 is woefully inadequate for the needs. Secondly, the purchasing process cannot usually respond as rapidly as prices rise. Suppliers give quotations which are only good for 24 hours. Many parts are not available in country and there are no provisions for the purchase of parts overseas.

## (2) Equipment Maintenance.

The Equipment Maintenance Division has 35 employees, of which over half have worked more than four years and additional eight who have been there more than two years. The Division has access to five vehicles to transport mechanics, materials and tools, but three of them are currently out of service. All vehicles are equipped with short wave radios with a base station in the Division's office.

Generally, requests for repairs come directly from the facility requesting, although they are some times channeled through the Office of the Secretary. Requests are recorded in a control book and generally require a technician to travel to the region to make the repair or determine the nature of parts needed. Once the repair has been completed the technician files a report on a standard form and the entry is marked off of the control book as being completed. A superficial review of the book demonstrates that most repairs are effected in a relatively timely fashion. Nevertheless, one report suggests that close to 75% of hospital equipment is inoperative at the present, suggesting the failure of the maintenance system.

The problems mentioned above in vehicle maintenance with regard to the general aspect of the repair shop and the difficulty of obtaining spare parts also pertain to the Equipment Maintenance Division.

## (c) Facility Maintenance.

Facility maintenance is the responsibility of the Architectural and Engineering Division which has six engineers who prepare plans and cost estimates and supervise construction activities in SESPAS facilities. They are currently in the midst of a major maintenance activity as a result of a special Presidential authorization of eleven million pesos for hospital maintenance activities. In addition, IDS has funded construction and maintenance activities on other facilities.

## 2. Constraints

The constraints are largely identical to those identified in the MSH analysis of the maintenance system conducted in April, 1983. Much of what follows is drawn from that report as amplified and modified by this team's observations.

### (a) Preventive Maintenance.

The primary problems inhibiting performance of preventive maintenance are (1) the identification of the responsible agent, (2) the training and orientation needed to enable that person to service the equipment, (3) the provision of the required resources, (4) the establishment of norms and procedures, and (5) supervision.

### (b) Repair Maintenance.

The requisite skills to effect repairs are generally not available at either the facility or the regional level. These deficiencies put increased pressure on the central level. If the skills are available at any of the three levels, there are generally other constraints as discussed below.

### (c) Overhaul.

The principal constraint is the lack of sufficient funds to permit equipment overhaul. With only RD\$ 25,000 per month to buy spare parts, the division can not even begin to address equipment overhaul needs.

### (d) Inventory.

There is no hospital equipment inventory, without which it is impossible to program a rational allocation of available resources. Vehicle inventory lists exist, but it is not clear how they are used for maintenance purposes.

### (e) Purchases.

There has been little, if any, involvement by maintenance personnel in the selection and purchase of equipment, although they will ultimately be responsible for its installation and maintenance. The result has been the purchase of a great deal of inappropriate equipment. The heat, humidity and voltage fluctuations to which equipment are exposed have generally not been taken into consideration. Equipment has often been purchased without guarantees for installation, service or repairs. Worse yet, equipment has been accepted without service manuals or guaranteed availability of replacement parts.

Since the Maintenance Division neither has an inventory of equipment, nor knows the types and frequencies of breakdowns, nor has any role in purchases, it has been impossible for them to maintain a stock of spare parts. The lack of a parts inventory, in turn, leads to a time-consuming search for individual parts in the commercial sector.

(f) Budget.

The severe budgetary restrictions under which the maintenance program operates have been mentioned above. Although the allocation of small rotating funds was a major step forward, efforts should be made to increase those funds so that the facilities and personnel dedicated to maintenance can make full use of their capacities.

(g) Staff.

Reference has been made above to deficiencies in the composition and skill level of maintenance staff, but this subject bears further examination. At present, no skill criteria are applied to prospective maintenance employees. Selection is more likely to be based on party affiliation or personal contacts. In general, both morale and motivation are very low.

(h) Organization.

The lack of equipment inventories and the inability to predict required maintenance needs lead to a system of management by crisis.

### 3. Recommendations

a. Manuals and norms need to be developed for the preventive maintenance of the most common and critical pieces of equipment. This would include among other things vehicles, cold chain equipment, generators and other hospital equipment. A dynamic inventory of equipment should be developed and maintained. This inventory could be developed gradually beginning with basic and critical pieces of equipment. A work order system should be implemented permitting better control of pending work.

b. All maintenance shops should be improved. Junked equipment should be discarded and working conditions improved. The central shop should have a generator so that resources are not wasted during the frequent power outages. Tools should be purchased for all shops and put under the personal responsibility of the directors of the various shops. Annex D gives a list of suggested equipment for the central automotive shop.

c. Budgets need to be increased and an equipment specialist with administrative expertise should be placed in charge of spare part procurement. Ideally, arrangements could be made for direct overseas procurement by SESPAS of parts which are not available in country and which dealers are unable or unwilling to obtain.

d. Personnel, particularly at the regional and facility level, should be subject to regular training and upgrading.

e. Maintenance personnel should be involved in the equipment purchasing process and every procurement should include an initial endowment of spare parts at the time of purchase.

## D. Other Areas.

### 1. Expansion and Consolidation of the Information System.

The project only contemplated the implementation of computerized information systems in two of the eight regions. If the pilot regions show success in the management and effective use of these systems, then the Mission and SESPAS should expand the system into other regions. This would also greatly assist in the institutionalization of this aspect of the project by eliminating the need for dual systems.

### 2. Consolidation of the Financial Systems.

Although all three of the financial subsystems will be in place, the project could greatly assist in the supervision and fine tuning of the systems, particularly at the lower levels. Assistance will be needed in using the wealth of information for improving overall management, i.e. using it for making management decisions such as where to put more personnel, where to put additional funds, where to cut funds, what spending patterns seem out of line, etc. Examples of potential uses of the data are legion but will likely require some technical assistance.

### 3. Expansion and consolidation of the Personnel System.

Since this is the area where least progress has been made, but with enormous potential benefits, additional technical assistance is warranted if SESPAS demonstrates a willingness to implement the personnel policy and restructuring which are under discussion. Key activities would be the training of supervisors and the beginnings of a rudimentary supervision system at all levels of SESPAS.

## VII. INCENTIVES FOR RECRUITING AND RETAINING COMPETENT PERSONNEL.

### A. Problem.

As noted above and by many consultants and experts, SESPAS, and the Government of the Dominican Republic in general, suffer from the lack of a Civil Service system. Attempts have apparently been made to address this problem at the national level but so far have not been successful. While the reasons behind this and the nature of the reforms proposed is beyond the scope of this report, some of the results are worth noting.

#### 1. Job instability.

There is a group of employees, particularly administrative personnel at lower levels, who know they are only going to work until the next change in government. This destroys the kind of motivation that job advancement opportunities provide in a more permanent employment situation and makes training programs much less cost effective because they have to be carried out more frequently due to the turnovers.

## 2. Poor selection.

Although hiring under the SESPAS system depends to a large extent on political recommendation, there are theoretically minimal job requirements which have to be met. Nevertheless, stories are legion about totally incompetent people who are put into positions for which they are not suited. This results in internal shuffling, as supervisors move people around trying to match the people which have been imposed on them to jobs for which they are capable. Every department seems to have people carrying functions different from those for which they were originally hired.

## 3. Pay inequalities.

Because of the lack of an official pay scale, every new employee has his wage decided upon individually. This results in persons with the same tasks and responsibilities receiving different pay, generating job discontent and decreased productivity.

## 4. Low pay.

The review of salaries in one health facility showed the facility administrator, the pharmacist and the floor sweeper receiving the same pay. The medical director received a salary which was only US\$ 28 per month more than that of the floor sweeper. It is extremely difficult to retain good employees under these circumstances. Nevertheless, the Director Nacional de Salud is attempting to upgrade salaries for key positions at the central level. If this meets with success and can continue gradually over time, it will alleviate the problem somewhat. Also the minimum wage was recently raised for all government employees from RD\$ 300 per month to RD\$ 400. Given the fate of inflation, reported currently at 60%, overall buying power has actually declined.

## B. Constraints.

1. Lack of Civil Service System. This has been discussed above.
2. Budgetary Limitations.
3. Lack of pay scales which permit "equal pay for equal work".
4. Lack of standards or routine processes for rewarding outstanding workers.

## C. Recommendations.

We believe that the activities and outputs established in the work plan for the personnel system are a reasonable and positive attempt to improve the system within the current constraints. The actions include the creation of a personnel policy which establishes certain basic premises including recruiting persons for positions based upon their suitability for that position, the responsibility and right of supervisors to express their opinion on the suitability of those to be hired and who will work under their supervision, the right of the supervisor to initiate promotion and advancement actions, the right of the supervisor to initiate disciplinary

actions, the concept of "equal pay for equal work" and the concept of structuring the personnel division around the implementation of the policy. Once these things are in place, the development and implementation of a supervision system which assures employees regular feedback on their performance and assists them in improving skills through direct contact with their supervisors and in service training courses will likely have a tremendously positive impact on overall performance.

## VIII. CONCLUSIONS.

A. USAID/Dominican Republic, SESPAS and Clapp and Mayne are to be congratulated on having designed and implemented an extremely successful project with limited funds in a relatively short period of time. This project opens up the possibility for having a considerable impact on health care by providing management with the tools for improved management of its limited financial and human resources.

B. Several elements of the project have been institutionalized and given the effectiveness of the methodology being used there is every reason to expect that most other elements of the project will also be institutionalized. The only potential exception is in the personnel area where lack of availability of counterpart time and the complexity of the issues involved will require renewed commitment on the part of SESPAS staff to assure that work plan goals are met. Another exception is that part of the financial and information systems which depend on the presence of the computers. AID should make every effort to resolve the outstanding procurement delays to assure that the computers and their software arrive in sufficient time to allow them to be fully integrated into SESPAS functioning while technical advisors are still present.

C. The factors favoring sustainability, particularly of the accounting procedures, far outweigh the factors against sustainability. An extension of technical assistance input would certainly favor sustainability of other inputs as well.

D. The chaotic personnel policies and practice currently in force in SESPAS are the most significant factor threatening long term survivability of reforms. Implementation of the work plan in the personnel area and expansion and extension of project activities in this area would help assure sustainability of project activities.

E. At present, the Project is developing the essential tools for improved management. It remains in the hands of SESPAS leadership to assure that these tools, especially improved information, are used for making management decisions. Key among these decisions is the shifting of resources to increase productivity.

F. Project activities should be extended for an additional period and expanded to include, at least, the purchasing area.

G. The reform methodology has been very effective. The degree of participation of counterparts at every step, the central role of the Coordinating Committee and the highly professional and disciplined approach of Clapp and Mayne advisors have been very important.

H. The current "window of opportunity" provided by the support of the current SESPAS administration for project activities will most likely be open for another two years. This presents the possibility of aggressively pursuing the current work to see that it is completed, consolidated and expanded beyond the current regions. Also, at least one other key area, purchasing and supply, should be addressed. The size and complexity of the maintenance problem and the presence of other donors, PAHO and IDB, working in this area speak against the Mission getting involved in it.

## IX. RECOMMENDATIONS.

A. During the remainder of the project, SESPAS should assure the highest priority be given to completing work plan goals in the area of personnel.

B. USAID/Dominican Republic should take the actions necessary to assure expedient delivery of computers and associated software.

C. SESPAS should reassess its policy prohibiting the use of user fees given the important role they have played in the past in making up budget shortfalls. AID should add this to its policy dialogue agenda.

D. Given the success of the project, the Mission and SESPAS should agree to extend the project for an additional two years. Elements of the project extension should include the following:

### 1. Personnel.

a. Completion of current work on policy, regulations restructuring and manuals.

b. Development of work standards and job descriptions.

c. Development of supervision guidelines.

d. Training of supervisors.

## 2. Finances

- a. Consolidation and fine tuning of budgeting process.
- b. Extension of computerized financial systems in the six regions not included in the original project.
- c. Supervision of the system at the central, regional and facility level.
- d. Adjustment and expansion of the cost accounting system based on experience with the current project.
- e. Completion of user fee accounting system if politically feasible

## 3. Information

- a. Expansion of the computerized information system into the six regions not covered under the current project.
- b. Development of additional routine reports which will assist central and regional level management in decision-making.

## 4. Purchasing and Supply

- a. Development of norms and procedures to govern all aspects of the purchasing and supply process including programming, procurement, storage, distribution and evaluation and control.
- b. Consolidation of all central level procurement under a central procurement authority, with the exception of the current rotating funds which should be maintained.
- c. Expansion of current warehousing capacity after conducting a needs assessment.
- d. Increased use of bulk purchasing, particularly of medications.

## 5. Transportation

- a. Purchase of eight vehicles, one for each of the two pilot regions and for each area within those regions to permit supervision and follow-up on project activities. See Annex E for suggested specifications.
- b. Development of preventive maintenance and vehicle control procedures for those eight vehicles.
- c. Development of guidelines and procedures for motor pool operations at the central level

**ANNEXES**

LIST OF PERSONS INTERVIEWEDSESPAS

Dr. Miguel Campillo, Director Nacional de Salud y Coordinador del Proyecto  
 Dr. Fernando Sanchez Agramonte, Assistant to the Secretary/SESPAS  
 Dra. Sonia Candelario Directora de Sistemas de Salud  
 Lic. Leonilda Miranda, Directora de Administracion  
 Lic. Luis Emilio Feliz Roa, Director de Computo  
 Lic. Federico Arias, Jefe de Departamento de Informatica  
 Lic. Luis Lora, Sub-Jefe de Departamento de Informatica  
 Col. Bienvenido Pichardo, Director Nacional de Transporte  
 Lic. Mirian Acevedo, Jefe de Compras y Suministros  
 Ing. Rafael Caamano, Jefe de Departamento de Mantenimiento  
 Ing. Manuel A. Segura, Encargado de los Talleres Mecanica  
 Dr. Jose L. Reyes Nin, Director Regional, Region I  
 Estadistico Regional, Region I  
 Administradora Regional, Region I  
 Dr. Manual Estrella, Director Regional, Region II  
 Lic. Ana Virginia Paulino, Administradora, Region II  
 Lic. Jose Mercedes Torlentino, Estadistico Regional, Region II  
 Lic. Angela Padovani, Jefe, Departamento de Personal  
 Lic. Ada Santana, Departamento de Personal  
 Lic. Altagracia de Robles, Departamento de Tesoreria, Seccion de Sueldos  
 Lic. Milagros Osorio, Departamento de Tesoreria  
 Lic. Migdalia Marciag, Departamento de Ejecucion Presupuestaria  
 Lic. Maria Marte Pena, Seccion de Nominales  
 Sra. Teresa Luna, Seccion de Revisiones de Cuentas Hospitalarias  
 Lic. Dorka Alcantara, Enc. Div. de Programacion  
 Lic. Rosa Francis, Enc. Div. de Presupuesto  
 Dra. Rita Gonzalez, Enc. de Div. de Presupuesto, Planes y Proyectos  
 Ing. Rafael Rivera, Departamento de Ingenieria y Obras Civiles  
 Dr. Tobia Genao, Director Ejecutivo, PROMESE  
 Dr. Osirio Madera, Jefe Nacional de Servicios de Emergencia,

CLAPP & MAYNE

Dr. Pedro Rosado del Valle, Jefe del Equipo  
 Dr. Armando Lassus, Asesor en Sistemas de Informacion  
 Dr. Alida Guzman, Asesor en Finanzas  
 Mr. Jaime Villalobos, Asesor en Personal

AID

Mr. Thomas Stuckel, Mission Director  
 Dr. Lee Hougen, Health and Population Officer  
 Mrs. Lisa Early, AID Project Manager

PAN AMERICAN HEALTH ORGANIZATION

Dr. Mitra Roses, Country Representative  
 Ing. Humberto Alfonso

INTERAMERICAN DEVELOPMENT BANK

Mr. Carlos Ramirez, Sectorial Specialist in Health

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ORGANIGRAMA DE LA SECRETARIA DE ESTADO DE SALUD PUBLICA Y, S.E.T.S.O. DEL  
DESPACHO DEL SECRETARIO DE ESTADO

SECRETARIO DE ESTADO  
DE SALUD PUBLICA

OPS / OMS

COMITE POLITICO

CONSEJO NACIONAL  
DE SALUD

CONAPOFA

SNEM

DIRECCION NACIONAL DE  
EMERGENCIA Y DESASTRES

OFICINA DE  
SERVICIOS  
ADMINISTRATIVOS

OFICINA DE  
RELACIONES  
PUBLICAS

OFICINA DE  
RELACIONES  
INTERNACIONALES

OFICINA  
JURIDICA

AUDITORIA

SUBSECRETARIA  
DE ASISTENCIA  
SOCIAL

SUBSECRETARIA  
COORDINACION  
IDSS

SUBSECRETARIA  
ASUNTOS  
COMUNITARIOS

SUBSECRETARIA  
SALUD PUBLICA

SUBSECRETARIA  
COORDINACION  
INTERSECTORIAL

DIRECCION NACIONAL  
DE SALUD

SECRETARIO DE ESTADO  
DE SALUD PUBLICA

DIRECCION NACIONAL  
DE SALUD

PROGRAMA DE  
MEDICINAS DE  
SESPAS

COMITE TECNICO

COMITE REGIONAL

DIRECCION DE SER-  
VICIOS DE SALUD

DIRECCION DE SANEA-  
MIENTO AMBIENTAL

SALUD RURAL

DIRECCION DE RE-  
CURSOS HUMANOS

DIRECCION DE  
ADMINISTRACION

DIRECCION DE SIS-  
TEMAS DE SALUD

DEPARTAMENTOS:

- MATERNO INFANTIL
- CONTROL DE ENFERMEDADES
- HOSPITALES
- SALUD ORAL
- LAB. Y BANCO DE SANGRE
- SALUD MENTAL
- FARMACOLOGIA Y FARMACIA
- ENFERMERIA
- NUTRICION
- SERVICIO SOCIAL

DEPARTAMENTOS:

- SANEAMIENTO BASICO
- CONTROL AMBIENTAL
- CONTROL DE ALIMENTOS

DEPARTAMENTOS:

- COORDINACION, FORMACION  
CIENCIAS DE LA SALUD
- CAP. PERSONAL SESPAS
- EDUCACION PARA LA SALUD
- DOCUMENTACION Y  
BIBLIOTECA

SUBDIRECCION FINANCIERA:

- CONTROL PRESUPUESTARIO
- TESORERIA Y NOMINAS
- CONTABILIDAD
- COMISION INTERVENTORA

SUBDIRECCION SERVICIOS ADM.

- DPTO. COMPRAS Y SUMINISTROS
- DPTO. ARQUITECTURA E ING.
- DPTO. MANTENIMIENTO
- DIV. RADIO Y COMUNICACION
- OPTO. PERSONAL
- DPTO. SERVICIOS GENERALES
- DIV. DE TRANSPORTE

DEPARTAMENTOS:

- VIGILANCIA EPIDEMIOLOGICA
- PLANES, PROGRAMAS Y  
PROYECTOS
- ORGANIZACION Y SISTEMAS
- INVESTIGACION
- INFORMATICA
- CENTRO DE COMPUTOS

NIVEL REGIONAL

DIRECCION NACIONAL DE SALUD

DIRECCION REGIONAL

SEJO DE ARROLLO UNITARIO

ITE TECNICO IONAL

SEJO DE ORDINACION R-SECTORIAL

OFICINA DE VIGILAN EPIDEMIOLOGICA E INFORMACION

DIVISION DE ATENCION MEDICA

DIVISION DE SANEAMIENTO AMBIENTAL

DIVISION DE ADMINISTRACION

AREAS SANITARIAS

## SANTO DOMINGO

## TOOLS RECOMMENDED FOR CENTRAL REPAIR SHOP

- 3 Bench Vises 4"
  - 1 Electric Welding Machine 300 amps Gasoline driven
  - 1 Set Gauges for oxygen and acetylene welding with hoses, tips and torch
  - 1 Hydraulic Press 10 ton
  - 2 24" pipe wrenches
  - 1 3 pound Hammer
  - 1 8 pound sledge Hammer
  - 1 Floor Jack 4 ton
  - 2 Hydraulic Jacks 4 tons
  - 1 Hydraulic Jack 6 ton
  - 2 Creepers
  - 1 Hydraulic Press arbor
  - 1 Porta Press
  - 1 Set Body Dollies
  - 1 Set Body Tools- Hammers and Small Dollies
  - 1 18" Crescent Wrench
  - 2 12" Crescent Wrenches
  - 1 10" Crescent Wrench
  - 3 Sets Hand Tools which include Metric and Standard
  - 1 Set Screw Drivers
  - 1 Electric Drill 1/2 Chuck
  - 1 Electric Drill 1/4" Chuck
  - 1 Electric Angle Grinder
  - 1 Electric Drill 3/8" Chuck
  - 1 Hydraulic Drill Press
  - 1 1 ton Come-A-Long Chain Tackle
  - 2 1/2 ton Chain Fall
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Many of these tools could be used for General Plant Maintenance when need for an emergency Repair.

A clean shop equipped with the above tools will more than double the production plus improve satisfaction and efficiency. Would suggest

SEARS CRAFTSMAN TOOLS they are good quality and much more economical in price.

*All Tools should be numbered with electric MARKING machine, All HAND Tools should be controlled by Chit system, Each Mechanic Having his Number.*

#### REGIONAL SHOP TOOLS

~~To organize a small Maintenance Shop that would be productive~~

~~they would need a small amount of hand tools such as:~~

~~voltage gauge~~

~~screw driver set~~

~~crescent wrenches 10 & 12"~~

~~Pipe wrench set 12"~~

~~hack saw~~

~~vise 4" bench type~~

~~electrical pliers~~

~~insulated pliers~~

~~side cutter pliers~~

~~electric drills~~

~~hammer~~

~~Sears 112 piece set small tools~~

~~A few small tools and saws for the Carpenter~~

~~Pipe wrenches and cutters for the Plumber~~

~~All of the above plus other items needed to establish a workable,~~

~~Maintenance Shop organization would cost approximately US\$5,000.00~~

~~at a Sears Store. The SEARS TOOL SET has METRIC AND STANDARD Tools, each type are complete sets.~~

~~Gasoline at Bani costs \$3.50DR per gallon~~

~~Diesel Fuel at Bani costs \$2.51DR per gallon~~

~~At the time we were there the Electrical Engineer was repairing~~

~~Hospital equipment, or trying to with no tools or testers~~

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