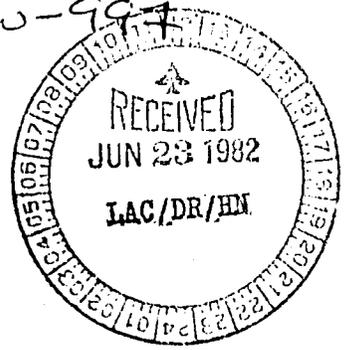


PD AACW-997  
5/11/82



MEMORANDUM

TO: Audrey Wight USAID/S&T/N

June 21, 1982

FROM: Gary Smith USDA/OICD/NEG

SUBJECT: Report on TDY to Dominican Republic June 6-12, 1982

1. I have interpreted the scope of work for the subject TDY rather liberally. That is, in addition to the narrower purview of uses which might be made of the Dominican Republic Central Bank household budget survey data of 1976 - 1977 for the USAID Health Sector III project, I have looked at the broader issue of nutrition planning as it relates to rural development planning in general in the Dominican context. In doing this, I am aware of being a bit presumptuous, since my entire experience in the Dominican Republic totals exactly four working days. On the other hand, I have followed the work of Musgrove and Ross in their editing of the Central Bank data tapes, I've had four years of experience with rural development planning in Guatemala, and, finally, there was little disagreement among the Dominicans and AID personnel I spoke with about the plusses and minuses of the Dominican development planning apparatus.
2. As I say more than once in the report, the lack of communication I found among different planning agencies in the GODR has its counterpart in the USAID/Santo Domingo mission. Not only are the Rural Development and Health/Nutrition Offices pursuing separate courses, they are not even located in the same building. Nevertheless, after looking at both the Health Sector project proposal and the Rural Development Office's proposed marketing project, I concluded that there is a significant range of information and areas of analysis over which the needs of the two projects coincide. This "in microcosm" mirrors the problem facing development planning in the Republic. After pointing this out to Lic. Dulce Jimenez of the Health/Nutrition Office and Mr. Joseph Kwiatekowski of the Rural Development Office, I was delighted when both expressed enthusiastic interest and indicated they would improve inter-office communication from now on. It would be nice if the Dominicans were to make a similar commitment....

THE DOMINICAN REPUBLIC CENTRAL BANK HOUSEHOLD BUDGET DATA:  
THE POSSIBLE USES FOR THIS AND SIMILAR KINDS OF  
INFORMATION FOR THE FORMATION OF A NUTRITION  
PLANNING CAPABILITY AS PART OF THE  
USAID HEALTH SECTOR III LOAN/GRANT PROJECT  
FOR THE DOMINICAN REPUBLIC

Gary H. Smith  
Economist  
USDA/OICD/Nutrition Economics Group

Washington, D. C.  
June 1982

## SUMMARY OF RECOMMENDATIONS

- I. Principal uses of Central Bank Data in general
  - A. Descriptive statistics relating food consumption to some important family characteristics.
  - B. Calculation of price and expenditure elasticities of demand for most frequently consumed foods.
  - C. Estimation of individual and systems consumption functions for basic foods (and nutrient intakes) permitting limited forecasting of the consumption impact of income changes.
- II. Additional uses for consumption survey data in the future
  - A. Estimating necessary income changes needed to induce recommended consumption of desirable foods.
  - B. Estimating the effect of incomes and price changes upon nutrient intakes.
  - C. Investigation of the most important cultural determinants of food beliefs and habits inhibiting good nutrition.
  - D. Measuring unexpected effects on nutrition of development policies not oriented towards health/nutrition goals per se.
  - E. Facilitating intersectorial collaboration among personnel engaged in data acquisition and processing, development analysis, and project programming.
- III. Issues related to Dr. Gueso's nine recommended "subprojects:"
  - A. Need to review the institutional makeup of Dominican development planning when deciding upon the appropriate structure of nutrition planning per se; presently very little collaborative planning, even within ONAPLAN
  - B. Need to insure that planning courses designed for nutrition planners and planners from other ministries include aspects of rural development problems and projects as well as health/nutrition ones.
  - C. Programs designed to teach principles of good nutrition and food preparation to primary school children should have parallel adult education counterparts for the children's parents.
  - D. Studies of the effects of food assistance (e.g., FL 480) should be undertaken intersectorially, that is from both the standpoint of consumption/nutrition effects and production/incentive impacts.
  - E. Prior to designating new personnel for workshops in nutrition, existing public sector analysts should be investigated as potential nutrition planners.
  - F. Nutrition surveillance is a logical use for the kinds of data contained in the Central Bank survey if relatively simple indicators are devised from them which can be added to future rural sector surveys of any kind in order to maintain a steady flow of information about nutrition status at national and regional levels.
  - G. The Central Bank data (or others like them) can be used as inputs to the suggested feasibility study for a food supplement production plant.

- H. The proposed in-depth study of food consumption, nutrition status, and socio-economic variables in three communities would serve as a logical pilot model for future surveys relating nutrition and agricultural development at local, regional, and national levels.
  - I. Personnel for overseas training should be drawn not only from the ranks of potential nutrition planners, but from potential agricultural development planners as well. Both nutrition and rural development planning courses and ways of interrelating them should be considered when devising plans of study for candidates.
- IV. Regarding planning in general: if information such as that obtained from the Central Bank survey is to be useful for planners, there is a need to improve both vertical and horizontal coordination among those Dominican agencies with a stake in data related to rural development, namely ONAPLAN, ONE, INESPRE, the Ministries of Health and Agriculture, and the Central Bank.

## I. BACKGROUND

During the period June 6-12, 1982, I visited the Dominican Republic at the request of the USAID Office of Nutrition to gather information about ways of using the Dominican Central Bank household consumption expenditure data to strengthen the nutrition component of the proposed Nutrition Sector III loan/grant project. This information was to be regarded as an extension of a report prepared by Dr. Reinaldo Grueso-Ortega of the New Transcentury Foundation, Informe de Consultoria Componente de Nutricion para el Tercer Prestamo-Donacion de USAID Sector Salud de Republica Dominicana (Santo Domingo, March 1982). The Central Bank household consumption expenditure data was gathered during 1977 and is the most comprehensive data set relating food expenditure/consumption to total consumption expenditure in the country. Since 1978, the USDA Nutrition Economics Group has been providing the Central Bank with the services of Dr. Philip Musgrove and Mr. Laurent Ross to clean and edit the data and to undertake a number of pilot socio-economic studies of potential utility for economic development planning in the country. Since detailed information about food consumption and nutrient intakes can be estimated from the data, the results of this activity (and of future activities related to it) are of considerable interest to Nutrition/health planners as well as rural development planners.

## II. ORGANIZATION OF THIS REPORT

It turned out that the time I had available for work in the Dominican Republic was only four working days; Thursday, June 10, was a local holiday. In addition, it seems that Dominican government workers occupy their desks for only 30 hours per week, 6 hours per day. Both of these factors strictly limited the amount of interviewing time with public sector personnel. Therefore I focused upon key individuals in decision-making positions within the agencies

most likely to use the kinds of information contained in the Central Bank's data set and others in the future: the Central Bank itself, the National Economic Planning Council (ONAPLAN), the National Statistics Office (ONE), the Agricultural Secretariat (SEA), and the National Pricing Institute (INESPRE). In addition I talked with representatives of the International Institute of Agricultural Sciences (IICA) and the USAID mission offices of health and rural development. A list of persons interviewed is included at the end of this report.

Section III of this report summarizes briefly the uses which can be made of the Central Bank data from the standpoint of both health/nutrition and rural development planning. Section IV examines some of the conclusions of the Grueso report in light of my findings about development planning and analysis in the Dominican Republic. Section V contains suggestions about how data useful for both nutrition and agricultural development might be obtained in the future and about how planners from both sectors (including their USAID counterparts) might profitably collaborate. Finally, Section VI lists the persons interviewed for this report.

### III. THE CENTRAL BANK DATA AND POLICY ANALYSIS

At the time of writing this report (mid-June 1982) the final edited data tape had not yet been delivered to the Dominican Central Bank, due to a number of last-minute technical problems experienced by Laurent Ross. As a consequence, the preliminary analyses to be undertaken by Philip Musgrove had not yet been underway either. Nevertheless, enough is known about the quality of the information to make reasonably intelligent suggestions about how the data might be used by both health and agriculture sector planners and project evaluators. In this section the discussion is confined to general uses, given a variety of project types; in the next section we will

focus upon the relationships between consumption expenditure data and some of the activities proposed by Dr. Grueso.

In general, the Central Bank data will yield three categories of information: (1) descriptive statistics, (2) elasticities of demand for food (and, indirectly, for nutrients), and (3) consumption functions for foods and nutrients.

Descriptive statistics include budget allocations for consumption items, item prices of foods purchased, physical consumption of foods (and, by derivation, intakes of nutrients), total consumption expenditures, estimates of household incomes; these data can be broken down by household size and composition (for example to obtain per capita consumption), by geographic region and by urban versus rural divisions. The original intent of the Central Bank was to use these statistics to generate price indices and cost-of-living indicators. However, the data, appropriately manipulated, can provide additional information of use for sector and project level planning and evaluation as follows.

Income and (possibly) price elasticities of demand for specific foods can be estimated. Income elasticities essentially estimate the "sensitivity" of quantity demanded to changes in income. Income elasticity of demand for an item (such as milk) is high when a relatively small increase in a person's income results in a relatively large increase in that person's purchases (and consumption) of the item. Similarly, price elasticities of demand measure the relationship between changes in the price of an item and corresponding changes in consumption. Income and price elasticities are especially useful for predicting the likely short run changes in patterns of demand for consumption items such as food as incomes and/or prices shift in response to policy measures, external market forces, and/or unforeseen natural disasters. In addition to elasticities, the descriptive statistics can be used to explore

possible causative relationships linking patterns of household food consumption with such things as family age and education patterns and geographic location by region and/or zone. Differences between urban and rural patterns of consumption may be detected and the longer term consequences of urbanization for incomes and relative prices of foods estimated. It may be possible to isolate certain cultural influences upon diet, information which would be useful in the design of nutrition education and home economics programs.

Consumption functions for foods and nutrients correlate broad ranges of incomes (and in some cases, prices) with corresponding ranges in the amounts demanded of specific items. Such functions can be estimated for individual foods or, given functions for all foods consumed by a household, for given nutrients by disaggregating all foods into component nutrients. Entire systems of consumption functions can sometimes be estimated for an economy, if enough data exists on quantities consumed of all significant foods, all income groups by income level and geographic location. The systems approach has the advantage of capturing all of the interactions among forces in the economy (for example the effect of the price of rice upon demand for oranges), but the volume of data required is high and the costs of processing and analysis are great. Individual consumption function estimates permit prediction of changes in demand for a given food or group of foods for short periods into the future only; however, they are easier to calculate and can be updated relatively often via sample surveys at lower cost than entire systems of equations. The tradeoff between comprehensiveness and accuracy versus the need for flexibility and quick information for policymakers in the face of cost constraints will be determined by the scope and priorities of the policies and programs under consideration during a given decision making cycle.

The ability to forecast likely changes in the demand for food as incomes and prices change forges a potentially strong link between projects promoting

agricultural development and those designed to improve health and nutrition in rural areas. Rural development programs are oriented in the main towards raising farm incomes and production. As incomes rise, however, the demand for food (and other consumption goods) changes differentially, rising rapidly for some items and falling for others. Since farm incomes in turn are largely determined by how much output can be sold and the patterns of relative prices in the marketplace, differential changes in demand induced by income changes will "feed back" upon farm incomes via changes in sales patterns and changes in the ratio of food sold versus food retained for home consumption. On the one hand, well specified consumption functions can be used to predict how much food (and nutrients) will be consumed in the future, given expected income and price changes. On the other hand, given minimum desired levels of consumption for certain foods and nutrients, consumption functions can be used to estimate what changes in income would be needed to induce those levels.

Health and nutrition programs impact upon rural development through improving the quantity and quality of labor, thereby increasing the long run return to investment in development programs, including agricultural technology and education. From the standpoint of a producing unit, the farm household's food consumption is an investment expenditure in the quality of its own labor. Beyond this, additional food consumption becomes "pure" consumption in the traditional sense of an activity pursued for its own sake, an additional motivation for desiring greater return (income) for labor expended. Hence, anything which leads to improved health and nutrition of the household enters the rural development picture via provision of essential investment resources and an important element of entrepreneurial motivation.

In short, health and nutrition programs, aside from their desirability on humanitarian grounds, play an important role in increasing productive efficiency in the farm sector and in stimulating effective demand for food.

Rural development programs, in turn, are essential if rural resources are to be increased enough to guarantee proper health and nutrition for all, including nonfarmers. Data of the kind obtained by the Dominican Central Bank can assist development planners to strike a rational balance among joint strategies for improvements in agriculture, industry, health, and education.

#### IV. CONSUMPTION DATA, ANALYSIS, AND THE GRUESO REPORT: SOME SUGGESTIONS

How the Central Bank data might be used for nutrition sector planning can best be explored by reviewing Dr. Grueso's recommendations in light of the remarks made in Section III above and my findings in the Dominican Republic.

Grueso's report is summarized in the form of nine recommended "sub-projects" designed to strengthen the nutrition component of the Health Sector project. I will discuss each in order as it relates to the issue of consumption/nutrition information and analysis.

SUBPROJECT No. 1: Development of a national level multisectoral nutrition planning unit.

Comment: The principal users of the Central Bank's data and other data like it, will be institutional personnel (e.g., the Bank itself), public sector development analysts, and private sector researchers. Logically, the function of nutrition planning should reside, at least in part, in the National Economic Planning Office (ONAPLAN). Additional agencies involved in health and nutrition planning would include the regional suboffices of ONAPLAN, the Ministry of Health, and the National Statistics Office (ONE). Following conversations with representatives of ONAPLAN and ONE, I found that these institutions rarely cooperate on specific sectoral projects. Before going ahead and specifying the exact personnel and logistical structure of a national level nutrition planning subunit to be added to existing units, I would suggest

studying ways and means of pulling together existing agencies in order to develop an effective framework of mutual cooperation in the following areas:

- (a) Prioritization of long run goals
- (b) Prioritization of short and medium run programs and targets
- (c) Prioritization and periodicity of data collection
- (d) Prioritization and implementation of multisectoral analysis

My impression is that, collectively, the various public sector agencies in the Dominican Republic devoted to agricultural, industrial, health, and educational development possess a wealth of underutilized personnel and resources. However, aside from lack of adequate training in specific cases, the major barrier to effective policymaking and implementation has been and continues to be fragmentation and compartmentalization of effort. I see no reason to believe that any newly created nutrition planning unit would be immune to this problem. On the contrary, experience in many countries suggests that such units tend to become especially isolated from the mainstream of rural development policymaking. Consequently, nutrition programs, when implemented at all, tend to be transitory "one-shot" affairs affecting specific localities rather than addressing long-run national level food problems.

Especially in the case of data collection and analysis, any nutrition planning unit would need help from other sectoral units. Even simplified consumption surveys are time consuming and costly. Efforts such as that made by the Central Bank cannot be repeated frequently enough to suit the needs of an effective nutrition surveillance/analysis system. Yet the health/nutrition sector often comes out second best in the process of fighting for budget allocations. What to do?

I suggest that the Health and Rural Development offices of the USAID mission get together and decide upon ways of encouraging unification and cooperation of policy making among the different economic sectors--at the ONAPLAN level, at the ministry level, and at regional levels. Both vertical and horizontal cross-stitching will ultimately be necessary. But if AID

can itself unite on ways to pursue coordinated development strategizing and transmit the results by way of, say, an "integrated rural sector planning project," the Dominican public sector agencies might be persuaded to follow suit.

Logically, overall planning for nutrition programs should occur within the Health Ministry. ONAPLAN would take nutrition plans and blend them together with other national level plans where resource needs overlap and where mutual impacts are likely to occur. The National Statistics Office would supply both the Ministry and the Planning Council with continuing data relevant to the health/nutrition status of the population and other data (e.g., agricultural production information, prices, incomes) likely to interact with health/nutrition. But all these activities need to be coordinated if field data is to be used to best advantage in supporting feasible development strategies.

In sum, I agree that there should be a focus within ONAPLAN on nutritional planning; but such planning must be blended with planning for all development activities influencing--and influenced by--health/nutrition.

SUBPROJECT No. 2: Nutritional planning course for members of the Policy Unit for Food and Nutrition (UPAN) and of ministerial planning offices.

Comment: This is an excellent idea, since, if done well, the course will heighten awareness of the importance of health and nutrition within the overall framework of economic development, especially in the farm sector. However, I suspect that more than a mere 15 days will be required to cover such arcane topics as systems analysis and linear programming, elements of human nutrition and their relationship to infectious disease, and--an additional item for the curriculum--typologies of agricultural development programs and how they will affect and be affected by nutrition policies. The latter are important to establish the symmetry between health/nutrition and agricultural

development efforts. Such a course should also include discussion of ways and means of collecting data of interest to analysts of both supply and demand in the rural sector: how to include consumption data in surveys of agricultural production and income and vice versa; what kinds of nutrition indicators would produce diagnostic information of use to nutrition planners yet be simple enough to be measured by nonspecialists at moderate cost; how best to combine food consumption and production information for realistic farm household enterprise modelling. Planners need to know the problems faced by surveyors and statisticians, and the latter need to have an appreciation of the needs of development analysts. Only by pooling information about problems and methods--across ministries and agencies and vertically from field to headquarters--will all these people be likely to function flexibly and creatively in concert. A comprehensive--and continuing--course or series of courses of the kind suggested can be a strong step in the right direction.

SUBPROJECT No. 3: Incorporation of nutrition education into the study plans of primary schools.

Comment: Another excellent suggestion. One of the activities recommended by Dr. Grueso is a diagnostic study of the consumption habits of the residents of three selected communities. Such a study would seek to capture (a) existing levels and patterns of food consumption, (b) techniques of food preparation and storage, (c) the distribution of meals within families, and (d) social, cultural, and other influences affect beliefs about these things. Presumably, this information would lead to the design of primary school teaching materials aimed at encouraging favorable dietary and food handling practices and discouraging unfavorable ones. And, one hopes, this material would have its counterpart in adult-oriented courses aimed at teaching the same things to the children's parents. Elements of the "diagnostic" survey parallel those found in the Central Bank's survey and desirable in

future surveys of consumer behavior, namely, amounts of food purchased for home consumption, amounts of food physically consumed by individuals for specified periods of time, proportions of family budgets allocated for food and for individual food items, given an existing pattern of prices and incomes. Since much of this information would be useful for agriculture sector planners, too, as we have seen, analysts interested in the present state and future evolution of food habits and dietary patterns will profit from frequent contact with agriculture sector analysts and data gathering activities.

SUBPROJECT No. 4: Study relating to food assistance.

Comment: There is a clear need to evaluate the extent to which PL 480 and other food assistance programs actually influence total food consumption, the patterns of foods consumed (and thus nutritional sufficiency), the distribution of foods across regional, cultural, and income boundaries, and the overall health status of recipients. On the other hand, food aid has often been accused of interfering with agricultural production incentives, especially if the aid is in the form of foods which compete effectively with traditional income-earning foods produced domestically. Here again, household expenditure and food consumption surveys like that undertaken by the Central Bank can go a long way towards helping analysts resolve such issues. In cases where food aid is focused upon a well-defined target population, detailed surveys undertaken jointly by health and agriculture sector personnel can save money and yield rich analytical results. Where it is suspected that food aid is diffusing widely beyond the intended target groups, special sample surveys can be designed to gather the necessary evidence; properly designed, such surveys, necessarily broader in scope than in the case of well defined target groups, can yield additional information of use for planners as an "extra return" justifying the extra expense, for example, information about food marketing generally in the regions involved.

In any case, the study (or series of studies) suggested by Dr. Grueso would be appropriate functions for the nutrition subsection of ONAPLAN in cooperation with agriculture sector analysts. Dr. Grueso rightly emphasises this when he suggests that representatives of CARE, the Ministries of Agriculture, Health, and Education, and other involved agencies participate in the activity. I think six months is a bit optimistic to expect such large scale cooperation on such a potentially complex study, however; I think they'd be doing well to get useful results in a year. Here I think the assistance of the Central Bank and the National Statistics Office would be very helpful in view of the experience both institutions gained during the household expenditure survey.

SUBPROJECT No. 5: Workshop concerning training of human resources in nutrition.

Comment: Dr. Grueso emphasizes that such a workshop would bring together representatives of Health, Agriculture, and Education ministries with appropriate personnel from ONAPLAN to develop strategies to recruit and train nutrition field workers. Since such workers would be rubbing shoulders with agriculturereal extensionists, rural credit agents, home economics trainers and other social workers, interagency coordination is certainly appropriate. It may even turn out that no new field people are necessary at all, that the existing population of field workers can be trained to supplement their existing portfolio of skills with techniques of food selection, storage, and preparation.

SUBPROJECT No. 6: Nutrition surveillance

Comment: Dr. Grueso strongly supports the need for coordinated data collection as between the health and agriculture sectors so that the nutritional status of the total population can be correlated with the natural fluctuations of the cropping cycle. He explicitly mentions the importance of using the results of the Central Bank's survey to help build a more

accurate surveillance system designed to indicate, not merely current nutritional status of groups, but some of the parallel forces and events contributing to that status, such as relative prices. Unlike traditional surveillance surveys, the inclusion of socio-economic variables, as we have seen, permits the estimation of demand elasticities and consumption functions which can be used for forecast changes in consumption (hence nutrition) patterns following targeted changes in prices and incomes. Unexpected changes in nutrition following policy measures not usually thought of in a nutritional context can be estimated, as well.

Unfortunately, surveys of the scale and scope achieved by the Central Bank usually cannot be undertaken as frequently as policymakers would like. Moreover, surveys designed to capture clinical nutrition information as well as accurate consumption data on a season-by-season basis are even more complex. Thus, as in many developing countries, the Dominican health sector has been in competition with the agriculture and other development sectors for scarce data acquisition and analysis resources.

Logically, then, possibilities for combining intersectorial resources should be explored. Somehow a tradeoff has to be found between large scale consumption/nutrition surveys which provide optimum information for health planners (but which are expensive and time consuming), on the one hand, and "quick and dirty" surveys which provide a coarse picture of nutrition status (but which can be updated often and are relatively cheap) on the other hand. Among other things, this implies searching for rough indicators of nutrition status which involve few complicated questions and/or activities by interviewers (e.g., measurement of upper-arm circumference) which might be "piggy-backed" onto other kinds of rural sector surveys, for example, agricultural production and land tenure surveys. In this way, both nutrition and agricultural planners can be kept up to date simultaneously regarding

nutritional status in various regions of the country and levels of rural output, incomes, and market prices. In short, just as there ought to be close exchange of information and cooperation among nutrition and agricultural planners, there should be cooperation in the areas of data acquisition and processing, including interaction among health, nutrition, and agricultural extension promoters in the field. (See also SUBPROJECT No. 8 below)

SUBPROJECT No. 7: Feasibility study for establishment of a production plant for food supplements.

Comment: The Central Bank data can be used to estimate roughly shortfalls in calorie, protein, and certain vitamin and mineral intakes, broken down by family characteristics, regional location, and other variables. This information, besides helping to determine what kinds of supplementation might be desirable and in what form the supplements might be most palatable, would aid in the decision about what scale of plant would be most economical (given present food processing technologies) and where the plant might be optimally located.

SUBPROJECT No. 8: Multisectorial intervention in three rural communities.

Comment: Here Dr. Delgado is proposing, as a pilot project, a detailed survey of three communities incorporating a wide range of information about factors determining, and determined by, the nutritional status of farm households. This is precisely the kind of study--albeit in greater detail--as recommended above at regional and national levels designed to keep development planners up to date about the joint nutrition, health, and agro-economic situation in the rural sector. As I see it, these studies would provide a valuable cross check on the levels of consumption estimated by the Central Bank survey, and could be used to determine which of the many possible relevant socioeconomic factors seem to correlate closely with nutrition status;

such variables would become candidate inputs to the general diagnostic indicators selected for frequent updating of nutritional information needed for flexible planning/implementation of programs and coordination of intersectorial analysis. For large scale regional or national surveys, these crude indicators would nevertheless signal the likelihood of problems in specific locations; subsequent detailed surveys restricted to those locations would reveal the exact kinds of nutrition problems involved, their probable causes, and their consequences in terms of agricultural productivity without having to mount a national level survey. Thus, the studies proposed by Dr. Grueso would provide excellent models for such focused surveys.

My only reservation concerns the "time frame" recommended by Dr. Grueso for this subproject. Three years seems excessive, in view of already-existing information which should be helpful in selecting the three communities; moreover, although I do not have the figures at hand, I would find it difficult to believe that within ONAPLAN, ONE, SEA, INSEPRE, and other public agencies plus such institutions as IICA and FAO there could not be found experienced personnel to assist in community selection, questionnaire preparation, data collection and analysis within, say, one year. With the help of USAID-sponsored advisors, ONAPLAN should be able to undertake the necessary coordinating function, and in so doing, provide a prototypical system for the kind of intersectorial cooperation we have been discussing.

SUBPROJECT No. 9: Overseas training for personnel.

Comment: Although it may be premature to specify exactly how many people will need special training overseas, there is no doubt that some such training would be valuable. In my experience, there are usually two problems with this kind of training: finding qualified candidates (whom the government is willing to part with during the time needed for training),

and insuring that once trained, the individuals will return to the country and, in fact, be assigned to positions utilizing their new skills. This may or may not be a problem in the Dominican context, but it is one which should be frankly explored with GODR counterparts.

My only other comment would be that, aside from canvassing the GODR for pre-existing skills in nutrition planning before selecting candidates for overseas training, that such additional skill categories as statistics, data collection and processing, and socio-economic analysis be included as criteria for this project. People with these skills are presently employed by the Central Bank, ONE, and ONAPLAN, and it may be that coordination among these institutions and consolidation of functions will reveal no need for additional personnel for nutrition planning alone; but an analysis of the present deployment of the public sector's analytic and planning personnel should be made before nailing-down once and for all overseas training requirements for this subproject.

#### V. INTEGRATION OF NUTRITIONAL ANALYSIS AND PLANNING INTO OVERALL DEVELOPMENT PLANNING

The household expenditure data collected by the Dominican Central Bank was not originally intended to be used for detailed analyses of consumption behavior and nutrition status. Nevertheless, the fact that it could be so used is strong evidence for the mutuality of interests among the various sectors engaged in development planning. As we have seen, this in turn implies the desirability of mutuality in data acquisition, processing, and analysis as well, especially in the face of scarce planning resources.

We have seen that surveys, if designed expressly to obtain certain kinds of nutrition and/or consumption information in addition to other kinds of data, can provide relatively inexpensive supplements to more extensive (and costly) surveillance systems. Such information need not be highly detailed,

merely sufficient to signal the likelihood of some kind of serious nutritional problem in specific localities, which can subsequently be resurveyed in more detail.

Conversely, health/nutrition surveys undertaken, say, for specific projects, should seek to capture at least some basic socio-economic data, e.g., approximations of income, some key local food prices, certain peculiar food habits and beliefs.

Both kinds of "hybrid" surveys--agricultural surveys with supplementary consumption information and health surveys with supplementary socio-economic information--would facilitate interministerial collaboration in planning and ease ONAPLAN's task of insuring compatibility among all sectorial plans. SUBPROJECT No. 8, the "three-community" study, if successful, should provide the necessary guidelines for collaborative surveying and analysis in the future.

It is clear from my conversations with GODR personnel, that, if nutrition planning and surveying are to be successfully integrated into overall development planning in the Dominican Republic, there should be a comprehensive review of the entire institutional framework for planning in the country. ONAPLAN logically should function as a national level, analytic coordinator for all sectorial plans: setting priorities at the national level following guidelines from the decision makers, identifying alternative ways of achieving national goals and targets, assessing existing resources, and insuring compatibility among sector plans and projects. Actual physical planning and programming should take place at regional levels where local planners have a greater "feel" for local conditions and resources. Regional plans would then be passed "up the line" to ONAPLAN for review in light of other regional plans. At the same time, at both regional and national levels, a "horizontal dialogue" should be maintained among ministries and government agencies responsible for planning and plan implementation.

As I understand it, however, this kind of simultaneous "vertical" and "horizontal" communication rarely takes place in the public sector.

In the realm of planning data and information, the following kinds of "core" variables should have priority for all intersectorial planning involving nutrition:

Net household income (or surrogates, such as total household expenditure, farm size, type of house)

Family characteristics

Principal crops farmed (amounts produced and sold during most recent crop season)

Local unit prices of principal crops sold

Principal foods consumed generally, and consumed by family members individually during past 24 hours (only the most important two or three foods)

Simple anthropometry--for adults and children: upper arm circumference; for children (if feasible): height for age

Simple statement about health problems experienced by family during past year

No single one of these categories of information need necessarily be obtained in great detail, depending on the main purpose of any given survey. For health surveys, the first four categories could be kept at a very general level, as rough "supplementary" information; for socio-economic and agronomic surveys, the latter three categories would be kept simple, at the crude "indicator" level. In this manner, both health/nutrition and agricultural sectors would be continuously monitored and the likelihood of detecting situations meriting a closer look enhanced.

Finally, as I suggested earlier, the AID mission can improve the quality and efficiency of its own programs by promoting greater in-house communication and "brain storming." It should be clear that successful implementation of the Health Sector III project will have important repercussions for rural development as a whole and for agricultural program results. Similarly, I

see potential benefit for the proposed marketing project of information about food consumption (current and forecast) and regional goals for health and nutrition likely to be promoted by AID and the GODR. My personal view is that if, instead of the word "nutrition" the term "consumption" were stressed in health/nutrition programming, the essential link between the rural development and health sectors--food demand--would be highlighted in relation to food supply as concepts which should be studied simultaneously in devising total food strategies for the Dominican Republic.

#### VI. PERSONS INTERVIEWED FOR THIS REPORT

##### USAID/Santo Domingo:

Mr. Ron Venecia (Deputy Director)  
Dr. Oscar Rivera Rivera (Health and Nutrition)  
Lic. Dulce Maria Jimenez (Health and Nutrition)  
Lic. Henry Welhouse (Health and Nutrition)  
Mr. Joseph Kwiatekowski (Rural Development)

##### National Statistics Office (ONE):

Dr. Gumerciendo del Rosario  
Lic. Pátria Madera

##### Central Bank:

Lic. José Brea Bazil  
Lic. Domingo Rodríguez

##### National Planning Office (ONAPLAN):

Ing. Mildred Mercedes

##### Interamerican Institute for Agricultural Sciences (IICA):

Mr. Jerry Legrá

##### Ministry of Agriculture:

Dr. Ruben Nuñez